Westinghouse

REFRIGERANT **R410A**
**INVERTER**

AIR CONDITIONER

## Duct type

# DESIGN & TECHNICAL MANUAL

INDOOR

WHM24DMA21S
WHM36DMA21S

WHM48DMA21S
WHM60DMA21S

OUTDOOR

WHM24SZA21S

WHM36SZA21S

WHM48SZA21S
WHM60SZA21S



DR_AR061EW_02
2023.07.27

**Notices:**

- Product specifications and design are subject to change without notice for future improvement.
- For further details, please check with our authorized dealer.

**⚠ WARNING**

This product can expose you to chemicals including Plumbum, which is known to the State of California to cause cancer and birth defects or other reproductive harm.
For more information go to www.P65Warnings.ca.gov.

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# Part 1. INDOOR UNIT

## DUCT TYPE:

**WHM24DMA21S**
**WHM36DMA21S**
**WHM48DMA21S**
**WHM60DMA21S**

DUCT
WHM24-60DMA21S

# 1. Specifications

| Type | | | | | Duct | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Inverter, Heat pump | | | |
| Model name | | | | | WHM24DMA21S | WHM36DMA21S | WHM48DMA21S | WHM60DMA21S |
| Power supply | | | | | 208/230 V ~ 60 Hz | | | |
| Power supply intake | | | | | Outdoor unit | | | |
| Available voltage range | | | | | 198—253 V | | | |
| Capacity | | Cooling | Rated | kW | 7.03 | 10.56 | 14.07 | 16.41 |
| | | | | Btu/h | 24,000 | 36,000 | 48,000 | 56,000 |
| | | | Min.—Max. | kW | 2.23—7.33 | 2.81—10.70 | 5.36—15.24 | 5.36—17.41 |
| | | | | Btu/h | 6,700—26,000 | 11,800—36,800 | 18,300—52,000 | 18,300—59,400 |
| | | Heating | Rated | kW | 7.03 | 10.56 | 14.07 | 16.41 |
| | | | | Btu/h | 24,000 | 36,000 | 48,000 | 56,000 |
| | | | Min.—Max. | kW | 2.23—7.33 | 2.61—11.20 | 5.16—15.24 | 5.16—16.85 |
| | | | | Btu/h | 6,700—26,000 | 8,900—38,200 | 17,600—52,000 | 17,600—57,500 |
| | | Heating (17°F)*1 | Max. | kW | 5.16 | 7.91 | 11.37 | 13.30 |
| | | | | Btu/h | 17,600 | 27,000 | 38,800 | 45,400 |
| | | Heating (5°F)*2 | Max. | kW | 4.92 | 7.39 | 9.91 | 10.67 |
| | | | | Btu/h | 16,800 | 25,200 | 33,800 | 36,400 |
| Input power | | Cooling | Rated | kW | 2.200 | 3.770 | 4.690 | 6.560 |
| | | | Min.—Max. | | 0.560—2.900 | 1.122—3.981 | 1.423—5.708 | 1.490—7.569 |
| | | Heating | Rated | | 2.000 | 3.200 | 4.260 | 5.290 |
| | | | Min.—Max. | | 0.725—3.960 | 0.725—3.960 | 1.228—5.080 | 1.323—6.019 |
| Current | | Cooling | Rated | A | 9.6 | 16.5 | 21.0 | 26.8 |
| | | Heating | | | 8.7 | 14.1 | 19.0 | 21.0 |
| EER2 | | Cooling | | W/W | 2.9 | 2.8 | 3.0 | 2.4 |
| | | | | Btu/hW | 9.80 | 9.55 | 10.1 | 8.25 |
| COP2 | | Heating | | W/W | 3.4 | 3.3 | | 3.1 |
| | | | | Btu/hW | 11.60 | 11.26 | | 10.57 |
| SEER2 | | Cooling | | Btu/hW | 17.0 | 18.0 | 17.5 | 17.0 |
| HSPF2 | | Heating | | Btu/hW | 8.3 | 9.0 | 8.5 | |
| Power factor | | Cooling | | % | 99 | | | |
| | | Heating | | | 99 | | | |
| Moisture removal | | | | pints/h (L/h) | 4.6 (2.2) | 9.5 (4.5) | 11.6 (5.5) | 15.8 (7.5) |
| Maximum operating current*3 | | Cooling | | A | 25.0 | 35.0 | 50.0 | |
| | | Heating | | | 25.0 | 35.0 | 50.0 | |
| Fan | Airflow rate | Cooling | | CFM ($m^3$/h) | 800 (1,360) | 1,120 (1,905) | 1,588 (2,700) | 1,706 (2,900) |
| | | Heating | | | 800 (1,360) | 1,120 (1,905) | 1,588 (2,700) | 1,706 (2,900) |
| | Type × Qty | | | | Sirocco × 1 | | | |
| | Motor output | | | W | 249 | 373 | 559 | |
| Static pressure range | | | | inWG (Pa) | 0 to 0.8 (0 to 200) | | | |
| Sound pressure level*4 | | Cooling | HIGH | dB (A) | 55 | 57 | 64 | 65 |
| | | Heating | | | 55 | 57 | 64 | 65 |
| Heat exchanger type | | Dimensions (H × W × D) | | in (mm) | 17-1/2 × 16-1/2 × 1-1/16 (444 × 420 × 27.2)<br>17-1/2 × 16-1/2 × 1-1/16 (444 × 420 × 27.2) | | 20 × 21-1/2 × 1-5/16 (509 × 546 × 34)<br>20 × 21-1/2 × 1-5/16 (509 × 546 × 34) | |
| | | Fin pitch | | FPI | 18 | | 17 | |
| | | Rows × Stages | | | 4 × 20 | | 5 × 26 | |
| | | Pipe type | | | Copper | | | |
| | | Fin type | | | Aluminum | | | |
| Dimensions (H × W × D) | | Net | | in (mm) | 46-1/8 × 19-5/8 × 21-5/8 (1,170 × 500 × 550) | | 53-7/8 × 22 × 24 (1,370 × 560 × 610) | |
| | | Gross | | | 49-5/8 × 22-1/2 × 25-3/8 (1,260 × 570 × 645) | | 55-1/2 × 25-1/4 × 28 (1,410 × 640 × 710) | |
| Weight | | Net | | lb (kg) | 135.5 (61.5) | 140.0 (63.5) | 187.2 (85) | |
| | | Gross | | | 158.6 (72) | 163.1 (74) | 214.0 (97) | |
| Connection pipe | | Size | Liquid | in (mm) | Ø3/8 (Ø9.52) | | | |
| | | | Gas | | Ø5/8 (Ø15.88) | Ø3/4 (Ø19.05) | Ø7/8 (Ø22.22) | |
| | | Method | | | Flare | | | |
| Drain hose | | Material | | | ABS | | | |
| | | Tip diameter | | in (mm) | Ø15/16 (Ø24.5) (I.D.), Ø1-1/16 (Ø26.5) (O.D.) | | | |
| Operation range | | Cooling | | °F (°C) | 61 to 86 (16 to 30) | | | |
| | | | | %RH | 80 or less | | | |
| | | Heating | | °F (°C) | 61 to 86 (16 to 30) | | | |
| Remote controller type | | | | | Wired [locally purchased] | | | |
| Option | | | | | Heater kit | | | |

**NOTES:**

- Specifications are based on the following conditions:
  - Cooling: Indoor temperature of 80°FDB (26.67°CDB) /67°FWB (19.44°CWB), and outdoor temperature of 95°FDB (35°CDB) / 75°FWB (23.9°CWB).
  - Heating: Indoor temperature of 70°FDB (21.11°CDB) /59°FWB (15.56°CWB), and outdoor temperature of 47°FDB (8.33°CDB) /43°FWB (6.11°CWB).
  - *1: Heating (17°F): Indoor temperature of 70°FDB (21.11°CDB) /60°FWB (15.56°CWB), and outdoor temperature of 17°FDB (-8.33°CDB) /15°FWB (-9.44°CWB).
  - *2: Heating (5°F): Indoor temperature of 70°FDB (21.11°CDB)/60°FWB (15.56°CWB), and outdoor temperature of 5°FDB (-15.0°CDB)/4°FWB (-15.56°CWB).
  - Test conditions are based on AHRI 210/240 2023.
  - Pipe length: 25 ft (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- *3: Maximum current is maximum value when operated within the operation range.
- *4: Sound pressure level:
  - Measured values in manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

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| M condition | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Model name** | | | | **WHM24DMA21S** | **WHM36DMA21S** | **WHM48DMA21S** | **WHM60DMA21S** |
| Capacity | Cooling | Rated | kW | 7.03 | 10.56 | 14.07 | 16.41 |
| | | | Btu/h | 24,000 | 36,000 | 48,000 | 56,000 |
| | | Min.—Max. | kW | 2.23—7.33 | 2.81—10.70 | 5.36—15.24 | 5.36—17.41 |
| | | | Btu/h | 6,700—26,000 | 11,800—36,800 | 18,300—52,000 | 18,300—59,400 |
| | Heating | Rated | kW | 7.03 | 10.56 | 14.07 | 16.41 |
| | | | Btu/h | 24,000 | 36,000 | 48,000 | 56,000 |
| | | Min.—Max. | kW | 2.23—7.33 | 2.61—11.20 | 5.16—15.24 | 5.16—16.85 |
| | | | Btu/h | 6,700—26,000 | 8,900—38,200 | 17,600—52,000 | 17,600—57,500 |
| | Heating (17°F)* | Max. | kW | 5.16 | 7.91 | 11.37 | 13.30 |
| | | | Btu/h | 17,600 | 27,000 | 38,800 | 45,400 |
| Input power | Cooling | Rated | kW | 2.200 | 3.770 | 4.690 | 6.560 |
| | | Min.—Max. | | 0.560—2.900 | 1.122—3.981 | 1.423—5.708 | 1.490—7.569 |
| | Heating | Rated | | 2.000 | 3.200 | 4.260 | 5.290 |
| | | Min.—Max. | | 0.725—3.960 | 0.725—3.960 | 1.228—5.080 | 1.323—6.019 |
| Current | Cooling | Rated | A | 9.6 | 16.5 | 21.0 | 26.8 |
| | Heating | | | 8.7 | 14.1 | 19.0 | 21.0 |
| EER | Cooling | | W/W | 3.2 | 2.8 | 2.99 | 2.5 |
| | | | Btu/hW | 10.90 | 9.55 | 10.20 | 8.50 |
| COP | Heating | | W/W | 3.5 | 3.3 | | 3.1 |
| | | | Btu/hW | 11.95 | 11.26 | | 10.58 |
| SEER | Cooling | | Btu/hW | 18.0 | | | 17.5 |
| HSPF | Heating | | Btu/hW | 10.0 | 11.0 | 10.0 | |
| Power factor | Cooling | | % | 99 | | | |
| | Heating | | | 99 | | | |

**NOTES:**
Specifications are based on the following conditions:

- Cooling: Indoor temperature of 80°FDB (26.67°CDB)/67°FWB (19.44°CWB), and outdoor temperature of 95°FDB (35°CDB)/75°FWB (23.9°CWB).
- Heating: Indoor temperature of 70°FDB (21.11°CDB)/59°FWB (15.56°CWB), and outdoor temperature of 47°FDB (8.33°CDB)/43°FWB (6.11°CWB).
- *: Heating (17°F): Indoor temperature of 70°FDB (21.11°CDB)/60°FWB (15.56°CWB), and outdoor temperature of 17°FDB (-8.33°CDB)/15°FWB (-9.44°CWB).
- Test conditions are based on AHRI 210/240 2017.
- Pipe length: 25 ft (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.)

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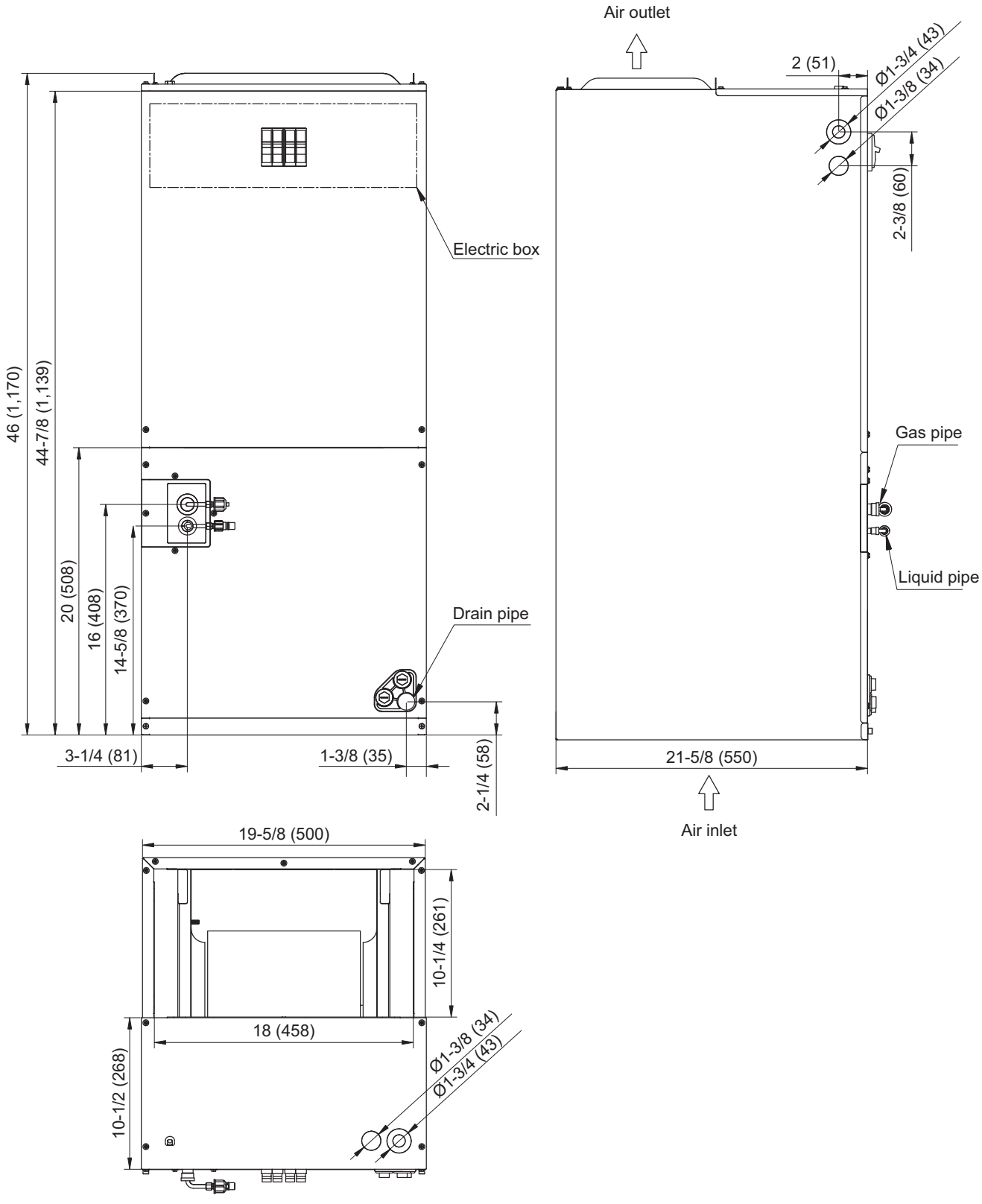
# 2. Dimensions

## 2-1. Models: WHM24DMA21S and WHM36DMA21S

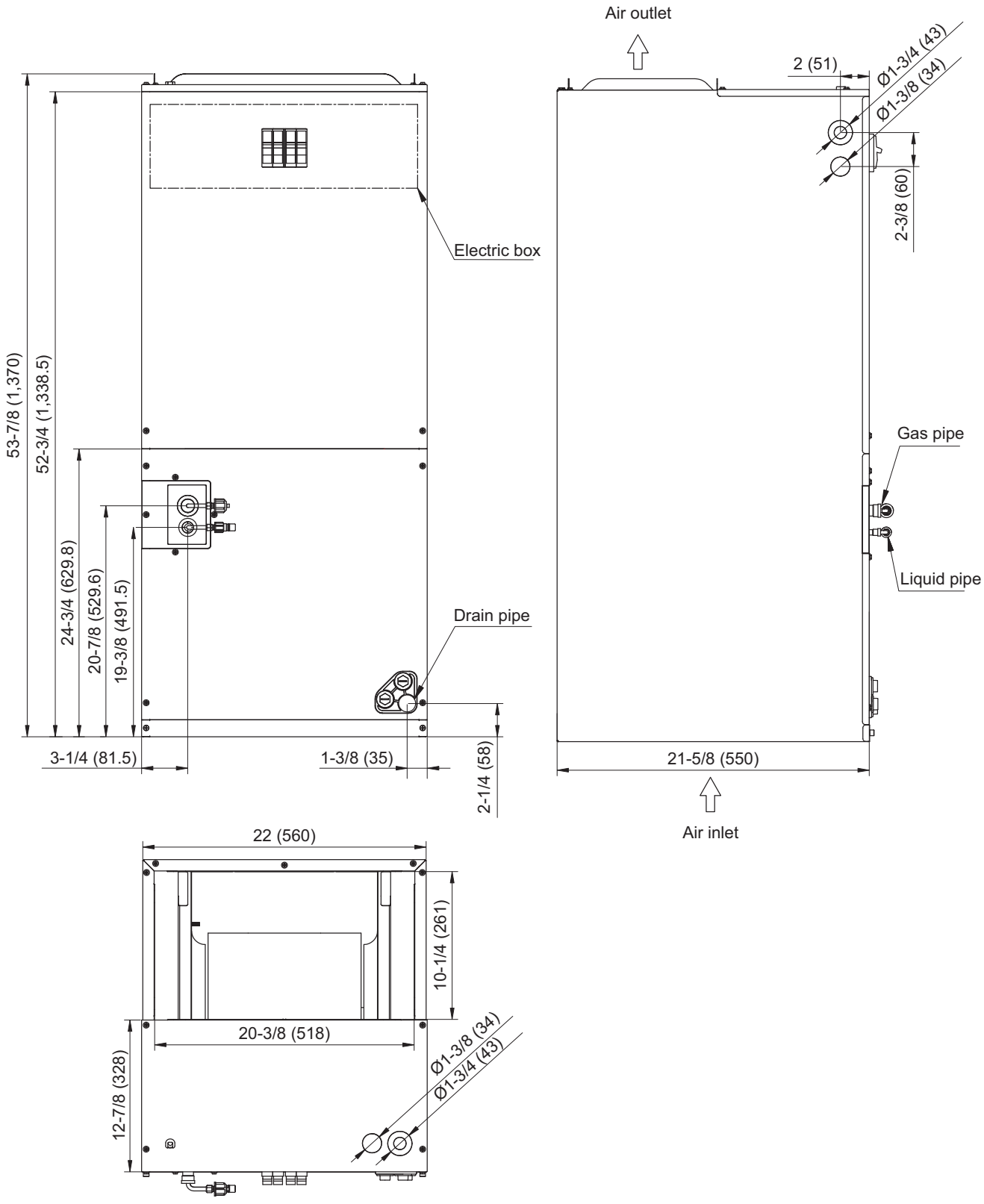
Unit: in (mm)



DUCT
WHM24-60DMA21S

# 2-2. Models: WHM48DMA21S and WHM60DMA21S

Unit: in (mm)

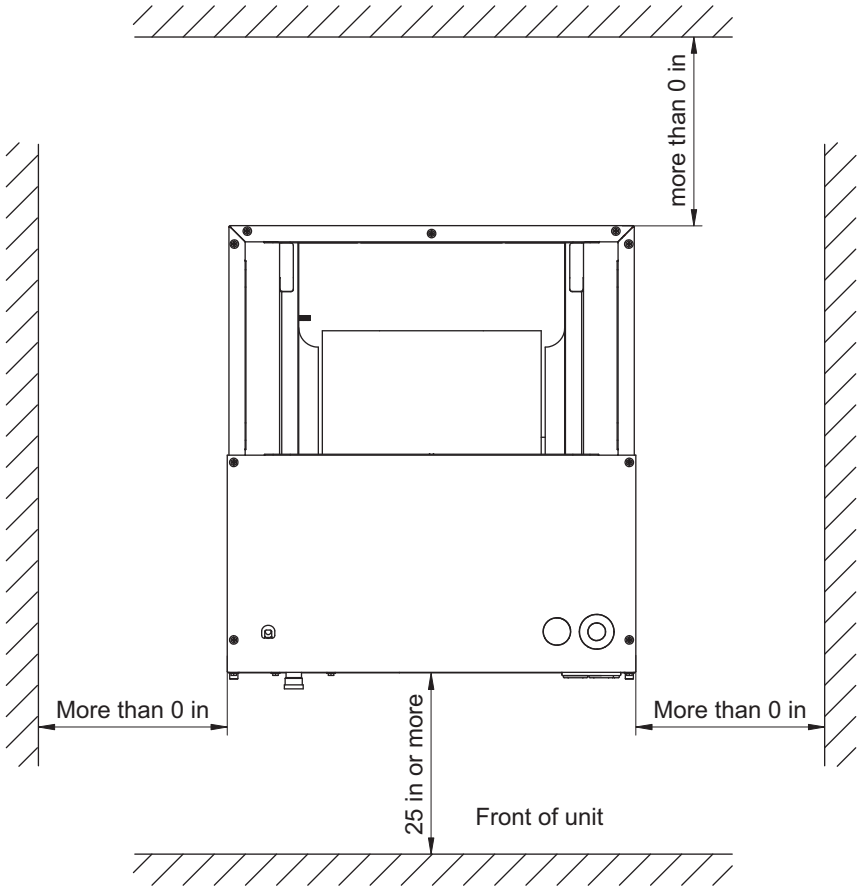


DUCT
WHM24-60DMA21S

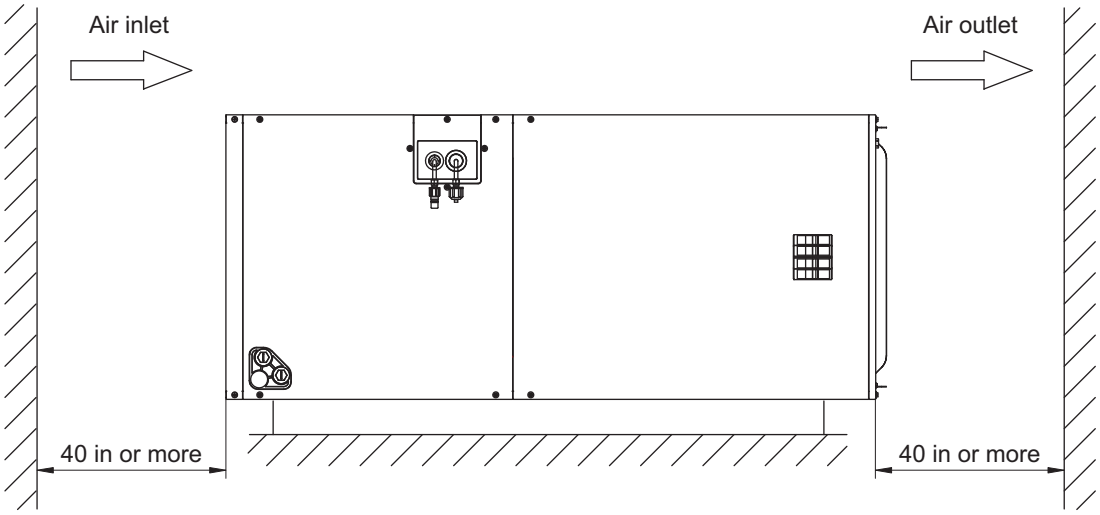
# 2-3. Installation space requirement

Provide sufficient installation space for product safety.

- Clearance in the vertical position



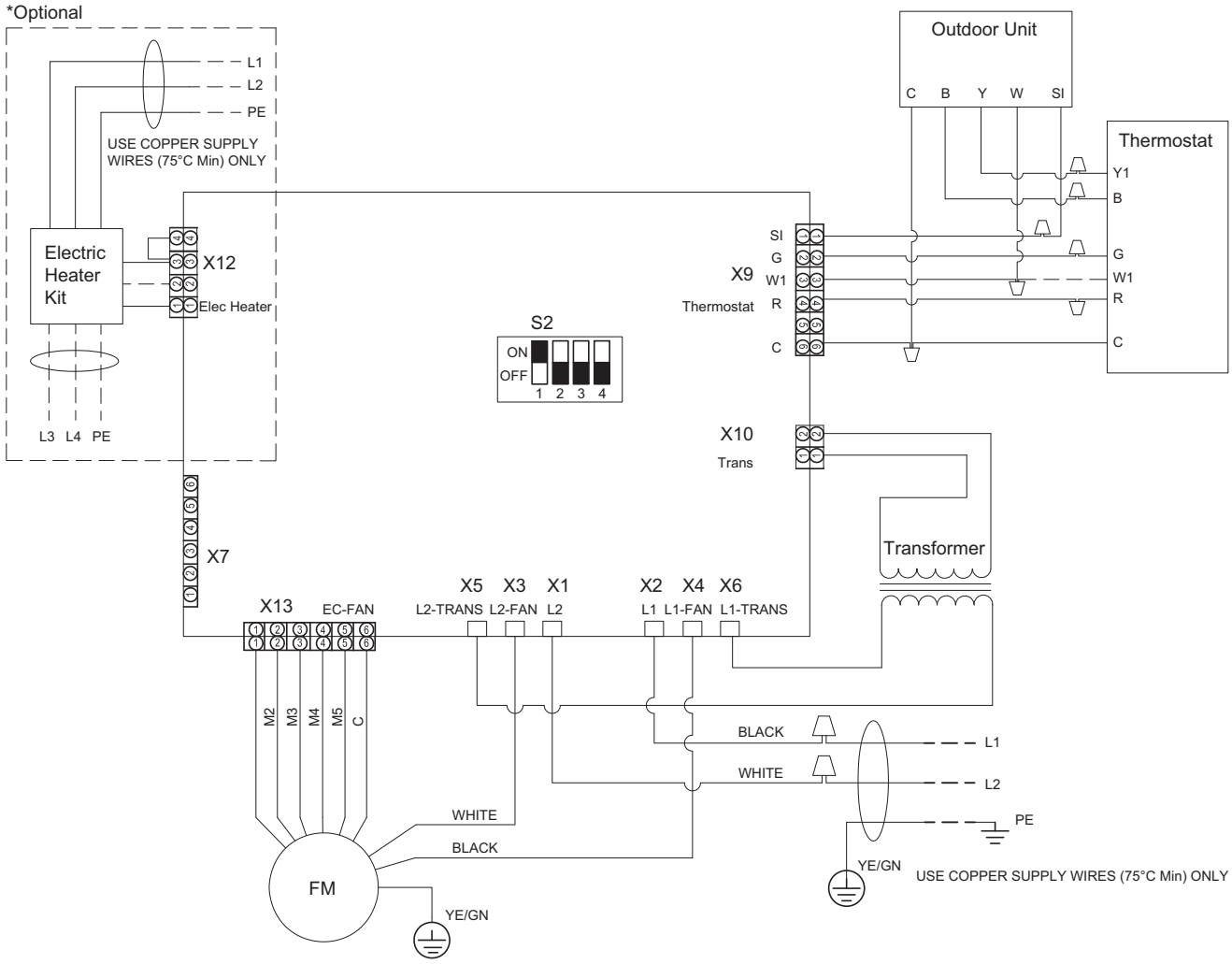

- Clearance in the horizontal position



DUCT
WHM24-60DMA21S

# 3. Wiring diagrams

## 3-1. Models: WHM24DMA21S, WHM36DMA21S, WHM48DMA21S, and WHM60DMA21S




Fan motor

| Pin No. | Terminal code | Function of terminal | Lead wire color |
|---|---|---|---|
| 1 | M1 | Fan speed | Brown |
| 2 | M2 | Fan speed | Blue |
| 3 | M3 | Fan speed | Yellow |
| 4 | M4 | Fan speed | Gray |
| 5 | M5 | Fan speed | Red |
| 6 | C | Common | White |
| 7 | N | Fan input neutral | White |
| 8 | L | Fan input live | Black |
| 9 | YE/GN | GND | —— |

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WHM24-60DMA21S

# 4. Capacity table

Capacity tables show each of following values calculated based on the outdoor temperature and the indoor temperature, under given Airflow Rate (AFR):

**For cooling capacity:** Total Capacity (TC), Sensible Heat Capacity (SHC), and Input Power (IP)

**For heating capacity:** Total Capacity (TC) and Input Power (IP)

## 4-1. Cooling capacity

### ■ Model: WHM24DMA21S

| AFR | CFM | 800 |
|---|---|---|

| Airflow (CFM) | Outdoor DB | IWB (°F) | 59 | | | | 63 | | | | 67 | | | | 71 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | IDB (°F) | 70 | 75 | 80 | 85 | 70 | 75 | 80 | 85 | 70 | 75 | 80 | 85 | 70 | 75 | 80 | 85 |
| 600 | 65 | TC | 20.5 | 20.7 | 21.1 | 21.4 | 21.1 | 21.4 | 21.6 | 21.8 | 22.5 | 22.7 | 23.0 | 23.1 | — | 27.5 | 27.7 | 27.9 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.61 | 0.83 | 1.00 | 1.00 | 0.39 | 0.57 | 0.73 | 0.90 | — | 0.39 | 0.53 | 0.67 |
| | | kW | 1.22 | 1.23 | 1.24 | 1.24 | 1.24 | 1.26 | 1.27 | 1.28 | 1.28 | 1.29 | 1.31 | 1.32 | — | 1.61 | 1.63 | 1.65 |
| | 75 | TC | 20.5 | 20.7 | 21.1 | 21.4 | 21.1 | 21.4 | 21.6 | 21.8 | 22.6 | 22.8 | 23.0 | 23.2 | — | 27.2 | 27.4 | 27.6 |
| | | S/T | 1.00 | 1.00 | 0.99 | 1.00 | 0.62 | 0.83 | 1.00 | 1.00 | 0.39 | 0.56 | 0.73 | 0.90 | — | 0.39 | 0.53 | 0.67 |
| | | kW | 1.35 | 1.37 | 1.38 | 1.38 | 1.38 | 1.40 | 1.42 | 1.42 | 1.42 | 1.44 | 1.46 | 1.47 | — | 1.78 | 1.80 | 1.81 |
| | 85 | TC | 20.2 | 20.4 | 20.8 | 21.1 | 20.8 | 21.1 | 21.3 | 21.5 | 22.3 | 22.5 | 22.7 | 22.8 | — | 26.7 | 26.9 | 27.1 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.62 | 0.84 | 1.00 | 1.00 | 0.39 | 0.57 | 0.74 | 0.91 | — | 0.39 | 0.53 | 0.67 |
| | | kW | 1.53 | 1.54 | 1.56 | 1.56 | 1.56 | 1.57 | 1.59 | 1.61 | 1.61 | 1.62 | 1.64 | 1.65 | — | 2.02 | 2.04 | 2.06 |
| | 95 | TC | 19.8 | 20.0 | 20.5 | 20.7 | 20.5 | 20.7 | 20.9 | 21.1 | 21.9 | 22.1 | 22.3 | 22.5 | — | 26.1 | 26.3 | 26.4 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.62 | 0.84 | 1.00 | 1.00 | 0.39 | 0.57 | 0.74 | 0.92 | — | 0.39 | 0.53 | 0.68 |
| | | kW | 1.84 | 1.85 | 1.88 | 1.88 | 1.88 | 1.89 | 1.92 | 1.93 | 1.94 | 1.95 | 1.97 | 1.99 | — | 2.41 | 2.42 | 2.45 |
| | 105 | TC | 19.4 | 19.7 | 20.1 | 20.3 | 20.1 | 20.3 | 20.5 | 20.7 | 21.5 | 21.7 | 21.8 | 22.0 | — | 25.2 | 25.3 | 25.4 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.62 | 0.84 | 1.00 | 1.00 | 0.39 | 0.57 | 0.75 | 0.93 | — | 0.39 | 0.54 | 0.69 |
| | | kW | 2.18 | 2.21 | 2.23 | 2.23 | 2.23 | 2.26 | 2.28 | 2.30 | 2.30 | 2.33 | 2.34 | 2.37 | — | 2.79 | 2.79 | 2.80 |
| | 115 | TC | 17.4 | 17.6 | 18.0 | 18.2 | 18.0 | 18.2 | 18.4 | 18.6 | 19.3 | 19.5 | 19.5 | 19.7 | — | 20.9 | 21.1 | 21.1 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.62 | 0.85 | 1.00 | 1.00 | 0.40 | 0.60 | 0.79 | 0.99 | — | 0.39 | 0.58 | 0.76 |
| | | kW | 2.22 | 2.25 | 2.27 | 2.27 | 2.27 | 2.30 | 2.33 | 2.35 | 2.37 | 2.38 | 2.40 | 2.41 | — | 2.48 | 2.49 | 2.50 |
| 800 | 65 | TC | 22.0 | 22.2 | 22.7 | 23.0 | 22.7 | 23.0 | 23.2 | 23.4 | 24.3 | 24.5 | 24.7 | 24.9 | — | 29.4 | 29.6 | 29.8 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.63 | 0.86 | 1.00 | 1.00 | 0.39 | 0.58 | 0.76 | 0.94 | — | 0.39 | 0.54 | 0.69 |
| | | kW | 1.42 | 1.44 | 1.46 | 1.46 | 1.46 | 1.47 | 1.49 | 1.50 | 1.50 | 1.52 | 1.54 | 1.55 | — | 1.85 | 1.88 | 1.89 |
| | 75 | TC | 22.0 | 22.3 | 22.7 | 23.0 | 22.7 | 23.0 | 23.2 | 23.5 | 24.3 | 24.6 | 24.7 | 24.9 | — | 29.1 | 29.4 | 29.6 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.62 | 0.85 | 1.00 | 1.00 | 0.39 | 0.58 | 0.76 | 0.94 | — | 0.39 | 0.54 | 0.69 |
| | | kW | 1.56 | 1.57 | 1.59 | 1.59 | 1.59 | 1.61 | 1.62 | 1.64 | 1.64 | 1.65 | 1.68 | 1.69 | — | 1.95 | 1.97 | 1.99 |
| | 85 | TC | 21.6 | 21.8 | 22.3 | 22.6 | 22.3 | 22.6 | 22.8 | 23.1 | 23.9 | 24.1 | 24.3 | 24.5 | — | 28.4 | 28.6 | 28.8 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.63 | 0.86 | 1.00 | 1.00 | 0.39 | 0.58 | 0.76 | 0.95 | — | 0.39 | 0.54 | 0.70 |
| | | kW | 1.72 | 1.73 | 1.76 | 1.76 | 1.76 | 1.77 | 1.79 | 1.81 | 1.81 | 1.83 | 1.84 | 1.87 | — | 2.25 | 2.26 | 2.29 |
| | 95 | TC | 21.4 | 21.6 | 22.1 | 22.3 | 22.1 | 22.3 | 22.5 | 22.8 | 23.4 | 23.8 | 24.0 | 24.1 | — | 27.7 | 27.8 | 28.0 |
| | | S/T | 1.00 | 1.00 | 0.99 | 1.00 | 0.63 | 0.87 | 1.00 | 1.00 | 0.39 | 0.58 | 0.76 | 1.00 | — | 0.39 | 0.55 | 0.71 |
| | | kW | 2.04 | 2.07 | 2.09 | 2.09 | 2.09 | 2.11 | 2.13 | 2.15 | 2.16 | 2.18 | 2.20 | 2.22 | — | 2.64 | 2.67 | 2.68 |
| | 105 | TC | 20.8 | 21.1 | 21.6 | 21.8 | 21.6 | 21.8 | 22.0 | 22.3 | 23.0 | 23.2 | 23.4 | 23.6 | — | 25.7 | 25.7 | 25.8 |
| | | S/T | 0.99 | 1.00 | 0.99 | 1.00 | 0.63 | 0.87 | 1.00 | 1.00 | 0.39 | 0.59 | 0.78 | 1.00 | — | 0.39 | 0.57 | 0.74 |
| | | kW | 2.41 | 2.44 | 2.46 | 2.46 | 2.46 | 2.49 | 2.52 | 2.54 | 2.55 | 2.57 | 2.60 | 2.61 | — | 2.86 | 2.84 | 2.86 |
| | 115 | TC | 17.3 | 17.5 | 17.8 | 18.0 | 17.8 | 18.0 | 18.2 | 18.4 | 19.6 | 19.7 | 19.4 | 19.5 | — | 20.2 | 20.3 | 20.4 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.64 | 0.88 | 1.00 | 1.00 | 0.40 | 0.62 | 0.86 | 1.00 | — | 0.40 | 0.62 | 0.84 |
| | | kW | 2.26 | 2.29 | 2.31 | 2.31 | 2.31 | 2.33 | 2.36 | 2.38 | 2.42 | 2.44 | 2.43 | 2.45 | — | 2.47 | 2.48 | 2.48 |
| 1,000 | 65 | TC | 23.4 | 23.7 | 24.1 | 24.4 | 24.1 | 24.4 | 24.7 | 25.0 | 25.9 | 26.1 | 26.2 | 26.4 | — | 31.0 | 31.2 | 31.7 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.64 | 0.88 | 1.00 | 1.00 | 0.39 | 0.59 | 0.78 | 0.99 | — | 0.38 | 0.55 | 0.71 |
| | | kW | 1.67 | 1.69 | 1.70 | 1.70 | 1.70 | 1.73 | 1.74 | 1.76 | 1.76 | 1.77 | 1.80 | 1.81 | — | 2.12 | 2.14 | 2.03 |
| | 75 | TC | 23.4 | 23.7 | 24.3 | 24.5 | 24.3 | 24.5 | 24.8 | 25.0 | 26.0 | 26.2 | 26.4 | 26.6 | — | 31.7 | 31.9 | 31.9 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.63 | 0.88 | 1.00 | 1.00 | 0.39 | 0.59 | 0.78 | 1.00 | — | 0.38 | 0.55 | 0.71 |
| | | kW | 1.72 | 1.73 | 1.76 | 1.76 | 1.76 | 1.77 | 1.79 | 1.81 | 1.81 | 1.83 | 1.84 | 1.87 | — | 2.33 | 2.34 | 2.34 |
| | 85 | TC | 23.0 | 23.2 | 23.7 | 24.0 | 23.7 | 24.0 | 24.2 | 24.5 | 25.5 | 25.6 | 25.8 | 25.9 | — | 29.9 | 30.1 | 30.3 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.64 | 0.89 | 1.00 | 1.00 | 0.39 | 0.59 | 0.79 | 1.00 | — | 0.39 | 0.56 | 0.73 |
| | | kW | 1.94 | 1.95 | 1.98 | 1.98 | 1.98 | 2.00 | 2.02 | 2.04 | 2.05 | 2.07 | 2.08 | 2.10 | — | 2.49 | 2.52 | 2.53 |
| | 95 | TC | 22.4 | 22.6 | 23.1 | 23.4 | 23.1 | 23.4 | 23.7 | 23.9 | 24.8 | 25.0 | 25.1 | 25.3 | — | 28.5 | 28.6 | 28.6 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.64 | 0.90 | 1.00 | 1.00 | 0.39 | 0.60 | 0.80 | 1.00 | — | 0.39 | 0.57 | 0.75 |
| | | kW | 2.28 | 2.30 | 2.33 | 2.33 | 2.33 | 2.35 | 2.37 | 2.40 | 2.41 | 2.43 | 2.45 | 2.46 | — | 2.82 | 2.83 | 2.83 |
| | 105 | TC | 21.8 | 22.0 | 22.5 | 22.7 | 22.5 | 22.7 | 23.0 | 23.2 | 24.1 | 24.3 | 24.4 | 24.6 | — | 26.0 | 26.2 | 26.0 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.65 | 0.90 | 1.00 | 1.00 | 0.39 | 0.60 | 0.81 | 1.00 | — | 0.39 | 0.59 | 0.79 |
| | | kW | 2.66 | 2.68 | 2.71 | 2.71 | 2.71 | 2.75 | 2.77 | 2.80 | 2.82 | 2.84 | 2.86 | 2.88 | — | 2.96 | 2.98 | 2.93 |
| | 115 | TC | 17.4 | 17.5 | 17.9 | 18.2 | 17.9 | 18.2 | 18.4 | 18.5 | 19.3 | 19.4 | 19.5 | 19.6 | — | 20.7 | 20.8 | 20.9 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.66 | 1.00 | 1.00 | 1.00 | 0.40 | 0.66 | 0.93 | 1.00 | — | 0.40 | 0.65 | 0.90 |
| | | kW | 2.35 | 2.37 | 2.41 | 2.41 | 2.41 | 2.43 | 2.45 | 2.48 | 2.51 | 2.52 | 2.53 | 2.54 | — | 2.62 | 2.63 | 2.64 |

DUCT
WHM24-60DMA21S

# ■ Model: WHM36DMA21S

| AFR | CFM | 1,120 |
|---|---|---|

| Airflow (CFM) | Outdoor DB | IWB (°F) | 59 | | | | 63 | | | | 67 | | | | 71 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | IDB (°F) | 70 | 75 | 80 | 85 | 70 | 75 | 80 | 85 | 70 | 75 | 80 | 85 | 70 | 75 | 80 | 85 |
| 600 | 65 | TC | 30.7 | 31.0 | 31.6 | 32.0 | 31.6 | 32.0 | 32.3 | 32.7 | 33.8 | 34.1 | 34.4 | 34.6 | — | 41.2 | 41.5 | 41.8 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.61 | 0.83 | 1.00 | 1.00 | 0.39 | 0.57 | 0.73 | 0.90 | — | 0.39 | 0.53 | 0.67 |
| | | kW | 2.06 | 2.09 | 2.10 | 2.10 | 2.10 | 2.13 | 2.14 | 2.17 | 2.17 | 2.18 | 2.21 | 2.23 | — | 2.73 | 2.76 | 2.80 |
| | 75 | TC | 30.7 | 31.1 | 31.7 | 32.0 | 31.7 | 32.0 | 32.5 | 32.8 | 33.9 | 34.2 | 34.5 | 34.7 | — | 40.8 | 41.1 | 41.4 |
| | | S/T | 1.00 | 1.00 | 0.99 | 1.00 | 0.62 | 0.83 | 1.00 | 1.00 | 0.39 | 0.56 | 0.73 | 0.90 | — | 0.39 | 0.53 | 0.67 |
| | | kW | 2.29 | 2.31 | 2.34 | 2.34 | 2.34 | 2.37 | 2.40 | 2.41 | 2.40 | 2.44 | 2.46 | 2.49 | — | 3.01 | 3.04 | 3.06 |
| | 85 | TC | 30.3 | 30.6 | 31.2 | 31.6 | 31.2 | 31.6 | 31.9 | 32.2 | 33.4 | 33.7 | 34.0 | 34.2 | — | 40.1 | 40.4 | 40.6 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.62 | 0.84 | 1.00 | 1.00 | 0.39 | 0.57 | 0.74 | 0.91 | — | 0.39 | 0.53 | 0.67 |
| | | kW | 2.58 | 2.61 | 2.64 | 2.64 | 2.64 | 2.66 | 2.69 | 2.72 | 2.72 | 2.74 | 2.77 | 2.80 | — | 3.41 | 3.45 | 3.48 |
| | 95 | TC | 29.7 | 30.1 | 30.7 | 31.1 | 30.7 | 31.1 | 31.4 | 31.7 | 32.9 | 33.2 | 33.4 | 33.7 | — | 39.1 | 39.4 | 39.7 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.62 | 0.84 | 1.00 | 1.00 | 0.39 | 0.57 | 0.74 | 0.92 | — | 0.39 | 0.53 | 0.68 |
| | | kW | 3.10 | 3.13 | 3.17 | 3.17 | 3.17 | 3.20 | 3.24 | 3.27 | 3.28 | 3.31 | 3.33 | 3.37 | — | 4.07 | 4.09 | 4.13 |
| | 105 | TC | 29.1 | 29.5 | 30.2 | 30.5 | 30.2 | 30.5 | 30.8 | 31.1 | 32.2 | 32.6 | 32.8 | 33.0 | — | 37.8 | 37.9 | 38.1 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.62 | 0.84 | 1.00 | 1.00 | 0.39 | 0.57 | 0.75 | 0.93 | — | 0.39 | 0.54 | 0.69 |
| | | kW | 3.69 | 3.73 | 3.77 | 3.77 | 3.77 | 3.81 | 3.85 | 3.89 | 3.89 | 3.93 | 3.96 | 4.00 | — | 4.71 | 4.72 | 4.74 |
| | 115 | TC | 26.1 | 26.4 | 27.0 | 27.2 | 27.0 | 27.2 | 27.5 | 27.9 | 29.0 | 29.2 | 29.3 | 29.5 | — | 31.4 | 31.6 | 31.7 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.62 | 0.85 | 1.00 | 1.00 | 0.40 | 0.60 | 0.79 | 0.99 | — | 0.39 | 0.58 | 0.76 |
| | | kW | 3.76 | 3.80 | 3.84 | 3.84 | 3.84 | 3.89 | 3.93 | 3.97 | 4.00 | 4.03 | 4.05 | 4.07 | — | 4.19 | 4.22 | 4.23 |
| 800 | 65 | TC | 33.0 | 33.3 | 34.1 | 34.4 | 34.1 | 34.4 | 34.9 | 35.2 | 36.5 | 36.7 | 37.0 | 37.4 | — | 44.0 | 44.3 | 44.7 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.63 | 0.86 | 1.00 | 1.00 | 0.39 | 0.58 | 0.76 | 0.94 | — | 0.39 | 0.54 | 0.69 |
| | | kW | 2.41 | 2.44 | 2.46 | 2.46 | 2.46 | 2.49 | 2.52 | 2.54 | 2.53 | 2.57 | 2.60 | 2.62 | — | 3.13 | 3.17 | 3.20 |
| | 75 | TC | 33.0 | 33.4 | 34.1 | 34.4 | 34.1 | 34.4 | 34.9 | 35.3 | 36.5 | 36.8 | 37.0 | 37.4 | — | 43.7 | 44.0 | 44.3 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.62 | 0.85 | 1.00 | 1.00 | 0.39 | 0.58 | 0.76 | 0.94 | — | 0.39 | 0.54 | 0.69 |
| | | kW | 2.64 | 2.66 | 2.69 | 2.69 | 2.69 | 2.72 | 2.74 | 2.77 | 2.77 | 2.80 | 2.84 | 2.86 | — | 3.29 | 3.33 | 3.36 |
| | 85 | TC | 32.5 | 32.8 | 33.5 | 33.9 | 33.5 | 33.9 | 34.2 | 34.6 | 35.9 | 36.2 | 36.4 | 36.7 | — | 42.6 | 42.9 | 43.2 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.63 | 0.86 | 1.00 | 1.00 | 0.39 | 0.58 | 0.76 | 0.95 | — | 0.39 | 0.54 | 0.70 |
| | | kW | 2.90 | 2.93 | 2.97 | 2.97 | 2.97 | 3.00 | 3.02 | 3.06 | 3.06 | 3.09 | 3.12 | 3.16 | — | 3.80 | 3.83 | 3.87 |
| | 95 | TC | 32.0 | 32.5 | 33.2 | 33.5 | 33.2 | 33.5 | 33.8 | 34.2 | 35.2 | 35.7 | 36.0 | 36.2 | — | 41.5 | 41.7 | 41.9 |
| | | S/T | 1.00 | 1.00 | 0.99 | 1.00 | 0.63 | 0.87 | 1.00 | 1.00 | 0.39 | 0.58 | 0.76 | 1.00 | — | 0.39 | 0.55 | 0.71 |
| | | kW | 3.45 | 3.49 | 3.53 | 3.53 | 3.53 | 3.56 | 3.60 | 3.64 | 3.65 | 3.68 | 3.72 | 3.75 | — | 4.47 | 4.51 | 4.54 |
| | 105 | TC | 31.2 | 31.6 | 32.3 | 32.7 | 32.3 | 32.7 | 33.0 | 33.4 | 34.4 | 34.9 | 35.1 | 35.4 | — | 38.5 | 38.5 | 38.7 |
| | | S/T | 0.99 | 1.00 | 0.99 | 1.00 | 0.63 | 0.87 | 1.00 | 1.00 | 0.39 | 0.59 | 0.78 | 1.00 | — | 0.39 | 0.57 | 0.74 |
| | | kW | 4.08 | 4.12 | 4.16 | 4.16 | 4.16 | 4.22 | 4.26 | 4.30 | 4.31 | 4.35 | 4.39 | 4.42 | — | 4.83 | 4.80 | 4.83 |
| | 115 | TC | 25.9 | 26.2 | 26.7 | 27.0 | 26.7 | 27.0 | 27.3 | 27.7 | 29.4 | 29.5 | 29.1 | 29.2 | — | 30.4 | 30.5 | 30.6 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.64 | 0.88 | 1.00 | 1.00 | 0.40 | 0.62 | 0.86 | 1.00 | — | 0.40 | 0.62 | 0.84 |
| | | kW | 3.83 | 3.87 | 3.91 | 3.91 | 3.91 | 3.95 | 3.99 | 4.03 | 4.09 | 4.12 | 4.11 | 4.13 | — | 4.17 | 4.19 | 4.20 |
| 1,000 | 65 | TC | 35.1 | 35.5 | 36.2 | 36.6 | 36.2 | 36.6 | 37.0 | 37.5 | 38.8 | 39.1 | 39.3 | 39.7 | — | 46.4 | 46.7 | 47.5 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.64 | 0.88 | 1.00 | 1.00 | 0.39 | 0.59 | 0.78 | 0.99 | — | 0.38 | 0.55 | 0.71 |
| | | kW | 2.82 | 2.85 | 2.88 | 2.88 | 2.88 | 2.92 | 2.94 | 2.97 | 2.97 | 3.00 | 3.04 | 3.06 | — | 3.59 | 3.61 | 3.43 |
| | 75 | TC | 35.2 | 35.6 | 36.4 | 36.7 | 36.4 | 36.7 | 37.1 | 37.6 | 39.0 | 39.2 | 39.5 | 39.9 | — | 47.6 | 47.8 | 47.9 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.63 | 0.88 | 1.00 | 1.00 | 0.39 | 0.59 | 0.78 | 1.00 | — | 0.38 | 0.55 | 0.71 |
| | | kW | 2.90 | 2.93 | 2.97 | 2.97 | 2.97 | 3.00 | 3.02 | 3.06 | 3.06 | 3.09 | 3.12 | 3.16 | — | 3.95 | 3.96 | 3.96 |
| | 85 | TC | 34.4 | 34.9 | 35.6 | 36.0 | 35.6 | 36.0 | 36.3 | 36.7 | 38.2 | 38.4 | 38.7 | 38.9 | — | 44.9 | 45.1 | 45.4 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.64 | 0.89 | 1.00 | 1.00 | 0.39 | 0.59 | 0.79 | 1.00 | — | 0.39 | 0.56 | 0.73 |
| | | kW | 3.28 | 3.31 | 3.35 | 3.35 | 3.35 | 3.39 | 3.41 | 3.45 | 3.47 | 3.49 | 3.52 | 3.55 | — | 4.22 | 4.26 | 4.28 |
| | 95 | TC | 33.6 | 33.9 | 34.6 | 35.1 | 34.6 | 35.1 | 35.5 | 35.8 | 37.3 | 37.5 | 37.7 | 38.0 | — | 42.7 | 42.9 | 42.9 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.64 | 0.90 | 1.00 | 1.00 | 0.39 | 0.60 | 0.80 | 1.00 | — | 0.39 | 0.57 | 0.75 |
| | | kW | 3.85 | 3.89 | 3.93 | 3.93 | 3.93 | 3.97 | 4.01 | 4.05 | 4.08 | 4.11 | 4.13 | 4.16 | — | 4.76 | 4.78 | 4.78 |
| | 105 | TC | 32.7 | 33.0 | 33.7 | 34.1 | 33.7 | 34.1 | 34.4 | 34.9 | 36.2 | 36.4 | 36.6 | 36.9 | — | 39.0 | 39.2 | 39.0 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.65 | 0.90 | 1.00 | 1.00 | 0.39 | 0.60 | 0.81 | 1.00 | — | 0.39 | 0.59 | 0.79 |
| | | kW | 4.50 | 4.54 | 4.59 | 4.59 | 4.59 | 4.64 | 4.68 | 4.74 | 4.76 | 4.80 | 4.83 | 4.87 | — | 5.00 | 5.03 | 4.95 |
| | 115 | TC | 26.1 | 26.3 | 26.9 | 27.2 | 26.9 | 27.2 | 27.5 | 27.8 | 29.0 | 29.1 | 29.2 | 29.4 | — | 31.1 | 31.2 | 31.3 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.66 | 1.00 | 1.00 | 1.00 | 0.40 | 0.66 | 0.93 | 1.00 | — | 0.40 | 0.65 | 0.90 |
| | | kW | 3.97 | 4.01 | 4.07 | 4.07 | 4.07 | 4.11 | 4.15 | 4.19 | 4.24 | 4.26 | 4.28 | 4.30 | — | 4.43 | 4.44 | 4.46 |

DUCT
WHM24-60DMA21S

# ■ Model: WHM48DMA21S

| AFR | CFM | 1,588 |
|---|---|---|

| Airflow (CFM) | Outdoor DB | IWB (°F) | 59 | | | | 63 | | | | 67 | | | | 71 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | IDB (°F) | 70 | 75 | 80 | 85 | 70 | 75 | 80 | 85 | 70 | 75 | 80 | 85 | 70 | 75 | 80 | 85 |
| 1,360 | 65 | TC | 40.9 | 41.3 | 42.2 | 42.7 | 42.2 | 42.7 | 43.1 | 43.5 | 45.1 | 45.5 | 45.9 | 46.2 | — | 55.0 | 55.4 | 55.8 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.61 | 0.83 | 1.00 | 1.00 | 0.39 | 0.57 | 0.73 | 0.90 | — | 0.39 | 0.53 | 0.67 |
| | | kW | 2.60 | 2.63 | 2.65 | 2.65 | 2.65 | 2.68 | 2.70 | 2.73 | 2.73 | 2.75 | 2.78 | 2.82 | — | 3.44 | 3.48 | 3.53 |
| | 75 | TC | 40.9 | 41.5 | 42.3 | 42.7 | 42.3 | 42.7 | 43.3 | 43.7 | 45.2 | 45.6 | 46.1 | 46.3 | — | 54.4 | 54.8 | 55.2 |
| | | S/T | 1.00 | 1.00 | 0.99 | 1.00 | 0.62 | 0.83 | 1.00 | 1.00 | 0.39 | 0.56 | 0.73 | 0.90 | — | 0.39 | 0.53 | 0.67 |
| | | kW | 2.88 | 2.92 | 2.95 | 2.95 | 2.95 | 2.99 | 3.02 | 3.04 | 3.02 | 3.07 | 3.10 | 3.14 | — | 3.80 | 3.83 | 3.86 |
| | 85 | TC | 40.3 | 40.8 | 41.6 | 42.2 | 41.6 | 42.2 | 42.6 | 43.0 | 44.5 | 44.9 | 45.4 | 45.6 | — | 53.4 | 53.8 | 54.1 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.62 | 0.84 | 1.00 | 1.00 | 0.39 | 0.57 | 0.74 | 0.91 | — | 0.39 | 0.53 | 0.67 |
| | | kW | 3.26 | 3.29 | 3.32 | 3.32 | 3.32 | 3.36 | 3.39 | 3.42 | 3.42 | 3.46 | 3.49 | 3.53 | — | 4.30 | 4.35 | 4.39 |
| | 95 | TC | 39.7 | 40.1 | 40.9 | 41.5 | 40.9 | 41.5 | 41.9 | 42.3 | 43.8 | 44.2 | 44.5 | 44.9 | — | 52.2 | 52.6 | 52.9 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.62 | 0.84 | 1.00 | 1.00 | 0.39 | 0.57 | 0.74 | 0.92 | — | 0.39 | 0.53 | 0.68 |
| | | kW | 3.91 | 3.95 | 4.00 | 4.00 | 4.00 | 4.03 | 4.08 | 4.12 | 4.13 | 4.17 | 4.20 | 4.25 | — | 5.13 | 5.16 | 5.21 |
| | 105 | TC | 38.8 | 39.4 | 40.2 | 40.6 | 40.2 | 40.6 | 41.0 | 41.5 | 43.0 | 43.4 | 43.7 | 44.0 | — | 50.4 | 50.5 | 50.8 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.62 | 0.84 | 1.00 | 1.00 | 0.39 | 0.57 | 0.75 | 0.93 | — | 0.39 | 0.54 | 0.69 |
| | | kW | 4.66 | 4.71 | 4.76 | 4.76 | 4.76 | 4.81 | 4.86 | 4.91 | 4.91 | 4.96 | 4.99 | 5.04 | — | 5.94 | 5.96 | 5.97 |
| | 115 | TC | 34.8 | 35.2 | 36.0 | 36.3 | 36.0 | 36.3 | 36.7 | 37.1 | 38.7 | 39.0 | 39.1 | 39.4 | — | 41.9 | 42.2 | 42.3 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.62 | 0.85 | 1.00 | 1.00 | 0.40 | 0.60 | 0.79 | 0.99 | — | 0.39 | 0.58 | 0.76 |
| | | kW | 4.74 | 4.79 | 4.84 | 4.84 | 4.84 | 4.91 | 4.96 | 5.01 | 5.04 | 5.08 | 5.11 | 5.13 | — | 5.28 | 5.31 | 5.33 |
| 1,560 | 65 | TC | 44.0 | 44.4 | 45.5 | 45.9 | 45.5 | 45.9 | 46.5 | 46.9 | 48.7 | 49.0 | 49.4 | 49.8 | — | 58.7 | 59.1 | 59.5 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.63 | 0.86 | 1.00 | 1.00 | 0.39 | 0.58 | 0.76 | 0.94 | — | 0.39 | 0.54 | 0.69 |
| | | kW | 3.04 | 3.07 | 3.10 | 3.10 | 3.10 | 3.14 | 3.17 | 3.21 | 3.19 | 3.24 | 3.27 | 3.31 | — | 3.95 | 4.00 | 4.03 |
| | 75 | TC | 44.0 | 44.5 | 45.5 | 45.9 | 45.5 | 45.9 | 46.5 | 47.0 | 48.7 | 49.1 | 49.4 | 49.8 | — | 58.3 | 58.7 | 59.1 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.62 | 0.85 | 1.00 | 1.00 | 0.39 | 0.58 | 0.76 | 0.94 | — | 0.39 | 0.54 | 0.69 |
| | | kW | 3.32 | 3.36 | 3.39 | 3.39 | 3.39 | 3.42 | 3.46 | 3.49 | 3.49 | 3.53 | 3.58 | 3.61 | — | 4.15 | 4.20 | 4.23 |
| | 85 | TC | 43.3 | 43.7 | 44.7 | 45.2 | 44.7 | 45.2 | 45.6 | 46.2 | 47.9 | 48.3 | 48.6 | 49.0 | — | 56.8 | 57.2 | 57.6 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.63 | 0.86 | 1.00 | 1.00 | 0.39 | 0.58 | 0.76 | 0.95 | — | 0.39 | 0.54 | 0.70 |
| | | kW | 3.66 | 3.69 | 3.75 | 3.75 | 3.75 | 3.78 | 3.81 | 3.86 | 3.86 | 3.90 | 3.93 | 3.98 | — | 4.79 | 4.82 | 4.88 |
| | 95 | TC | 42.7 | 43.3 | 44.2 | 44.7 | 44.2 | 44.7 | 45.1 | 45.6 | 46.9 | 47.6 | 48.0 | 48.3 | — | 55.4 | 55.7 | 55.9 |
| | | S/T | 1.00 | 1.00 | 0.99 | 1.00 | 0.63 | 0.87 | 1.00 | 1.00 | 0.39 | 0.58 | 0.76 | 1.00 | — | 0.39 | 0.55 | 0.71 |
| | | kW | 4.35 | 4.40 | 4.45 | 4.45 | 4.45 | 4.49 | 4.54 | 4.59 | 4.61 | 4.64 | 4.69 | 4.72 | — | 5.63 | 5.69 | 5.72 |
| | 105 | TC | 41.6 | 42.2 | 43.1 | 43.5 | 43.1 | 43.5 | 44.0 | 44.5 | 45.9 | 46.5 | 46.7 | 47.2 | — | 51.3 | 51.3 | 51.6 |
| | | S/T | 0.99 | 1.00 | 0.99 | 1.00 | 0.63 | 0.87 | 1.00 | 1.00 | 0.39 | 0.59 | 0.78 | 1.00 | — | 0.39 | 0.57 | 0.74 |
| | | kW | 5.15 | 5.20 | 5.25 | 5.25 | 5.25 | 5.31 | 5.36 | 5.42 | 5.43 | 5.48 | 5.53 | 5.57 | — | 6.09 | 6.06 | 6.09 |
| | 115 | TC | 34.5 | 34.9 | 35.6 | 36.0 | 35.6 | 36.0 | 36.5 | 36.9 | 39.2 | 39.4 | 38.8 | 39.0 | — | 40.5 | 40.6 | 40.8 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.64 | 0.88 | 1.00 | 1.00 | 0.40 | 0.62 | 0.86 | 1.00 | — | 0.40 | 0.62 | 0.84 |
| | | kW | 4.82 | 4.88 | 4.93 | 4.93 | 4.93 | 4.98 | 5.03 | 5.08 | 5.16 | 5.20 | 5.18 | 5.21 | — | 5.26 | 5.28 | 5.30 |
| 1,760 | 65 | TC | 46.7 | 47.3 | 48.3 | 48.8 | 48.3 | 48.8 | 49.4 | 49.9 | 51.8 | 52.2 | 52.5 | 52.9 | — | 61.9 | 62.3 | 63.3 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.64 | 0.88 | 1.00 | 1.00 | 0.39 | 0.59 | 0.78 | 0.99 | — | 0.38 | 0.55 | 0.71 |
| | | kW | 3.56 | 3.59 | 3.63 | 3.63 | 3.63 | 3.68 | 3.71 | 3.75 | 3.75 | 3.78 | 3.83 | 3.86 | — | 4.52 | 4.56 | 4.32 |
| | 75 | TC | 46.9 | 47.4 | 48.6 | 49.0 | 48.6 | 49.0 | 49.5 | 50.1 | 52.0 | 52.3 | 52.7 | 53.1 | — | 63.4 | 63.7 | 63.9 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.63 | 0.88 | 1.00 | 1.00 | 0.39 | 0.59 | 0.78 | 1.00 | — | 0.38 | 0.55 | 0.71 |
| | | kW | 3.66 | 3.69 | 3.75 | 3.75 | 3.75 | 3.78 | 3.81 | 3.86 | 3.86 | 3.90 | 3.93 | 3.98 | — | 4.98 | 4.99 | 4.99 |
| | 85 | TC | 45.9 | 46.5 | 47.4 | 48.0 | 47.4 | 48.0 | 48.4 | 49.0 | 50.9 | 51.2 | 51.6 | 51.9 | — | 59.8 | 60.1 | 60.5 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.64 | 0.89 | 1.00 | 1.00 | 0.39 | 0.59 | 0.79 | 1.00 | — | 0.39 | 0.56 | 0.73 |
| | | kW | 4.13 | 4.17 | 4.22 | 4.22 | 4.22 | 4.27 | 4.30 | 4.35 | 4.37 | 4.40 | 4.44 | 4.47 | — | 5.31 | 5.36 | 5.40 |
| | 95 | TC | 44.8 | 45.2 | 46.2 | 46.7 | 46.2 | 46.7 | 47.3 | 47.7 | 49.7 | 49.9 | 50.2 | 50.6 | — | 56.9 | 57.2 | 57.2 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.64 | 0.90 | 1.00 | 1.00 | 0.39 | 0.60 | 0.80 | 1.00 | — | 0.39 | 0.57 | 0.75 |
| | | kW | 4.86 | 4.91 | 4.96 | 4.96 | 4.96 | 5.01 | 5.06 | 5.11 | 5.15 | 5.18 | 5.21 | 5.25 | — | 6.01 | 6.02 | 6.02 |
| | 105 | TC | 43.5 | 44.0 | 44.9 | 45.5 | 44.9 | 45.5 | 45.9 | 46.5 | 48.3 | 48.6 | 48.8 | 49.3 | — | 52.0 | 52.3 | 52.0 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.65 | 0.90 | 1.00 | 1.00 | 0.39 | 0.60 | 0.81 | 1.00 | — | 0.39 | 0.59 | 0.79 |
| | | kW | 5.67 | 5.72 | 5.79 | 5.79 | 5.79 | 5.85 | 5.90 | 5.97 | 6.01 | 6.06 | 6.09 | 6.14 | — | 6.31 | 6.34 | 6.24 |
| | 115 | TC | 34.8 | 35.1 | 35.9 | 36.3 | 35.9 | 36.3 | 36.7 | 37.0 | 38.7 | 38.8 | 39.0 | 39.2 | — | 41.5 | 41.6 | 41.7 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.66 | 1.00 | 1.00 | 1.00 | 0.40 | 0.66 | 0.93 | 1.00 | — | 0.40 | 0.65 | 0.90 |
| | | kW | 5.01 | 5.06 | 5.13 | 5.13 | 5.13 | 5.18 | 5.23 | 5.28 | 5.35 | 5.36 | 5.40 | 5.42 | — | 5.58 | 5.60 | 5.62 |

DUCT
WHM24-60DMA21S

# ■ Model: WHM60DMA21S

| AFR | CFM | 1,706 |
|---|---|---|

| Airflow (CFM) | Outdoor DB | IWB (°F) | 59 | | | | 63 | | | | 67 | | | | 71 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | IDB (°F) | 70 | 75 | 80 | 85 | 70 | 75 | 80 | 85 | 70 | 75 | 80 | 85 | 70 | 75 | 80 | 85 |
| 1,500 | 65 | TC | 47.7 | 48.2 | 49.2 | 49.8 | 49.2 | 49.8 | 50.3 | 50.8 | 52.6 | 53.1 | 53.6 | 53.9 | — | 64.1 | 64.6 | 65.1 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.61 | 0.83 | 1.00 | 1.00 | 0.39 | 0.57 | 0.73 | 0.90 | — | 0.39 | 0.53 | 0.67 |
| | | kW | 3.68 | 3.73 | 3.76 | 3.76 | 3.76 | 3.80 | 3.83 | 3.88 | 3.88 | 3.90 | 3.95 | 3.99 | — | 4.88 | 4.93 | 5.00 |
| | 75 | TC | 47.7 | 48.4 | 49.3 | 49.8 | 49.3 | 49.8 | 50.5 | 51.0 | 52.8 | 53.2 | 53.7 | 54.1 | — | 63.5 | 64.0 | 64.4 |
| | | S/T | 1.00 | 1.00 | 0.99 | 1.00 | 0.62 | 0.83 | 1.00 | 1.00 | 0.39 | 0.56 | 0.73 | 0.90 | — | 0.39 | 0.53 | 0.67 |
| | | kW | 4.09 | 4.14 | 4.19 | 4.19 | 4.19 | 4.23 | 4.28 | 4.31 | 4.28 | 4.35 | 4.40 | 4.45 | — | 5.38 | 5.43 | 5.48 |
| | 85 | TC | 47.1 | 47.6 | 48.5 | 49.2 | 48.5 | 49.2 | 49.7 | 50.2 | 51.9 | 52.4 | 52.9 | 53.2 | — | 62.3 | 62.8 | 63.1 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.62 | 0.84 | 1.00 | 1.00 | 0.39 | 0.57 | 0.74 | 0.91 | — | 0.39 | 0.53 | 0.67 |
| | | kW | 4.62 | 4.66 | 4.71 | 4.71 | 4.71 | 4.76 | 4.81 | 4.86 | 4.86 | 4.90 | 4.95 | 5.00 | — | 6.10 | 6.17 | 6.22 |
| | 95 | TC | 46.3 | 46.7 | 47.7 | 48.4 | 47.7 | 48.4 | 48.9 | 49.3 | 51.1 | 51.6 | 51.9 | 52.4 | — | 60.9 | 61.4 | 61.7 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.62 | 0.84 | 1.00 | 1.00 | 0.39 | 0.57 | 0.74 | 0.92 | — | 0.39 | 0.53 | 0.68 |
| | | kW | 5.55 | 5.60 | 5.67 | 5.67 | 5.67 | 5.72 | 5.79 | 5.84 | 5.86 | 5.91 | 5.96 | 6.03 | — | 7.27 | 7.32 | 7.39 |
| | 105 | TC | 45.3 | 45.9 | 46.9 | 47.4 | 46.9 | 47.4 | 47.9 | 48.4 | 50.2 | 50.6 | 51.0 | 51.3 | — | 58.8 | 58.9 | 59.2 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.62 | 0.84 | 1.00 | 1.00 | 0.39 | 0.57 | 0.75 | 0.93 | — | 0.39 | 0.54 | 0.69 |
| | | kW | 6.60 | 6.67 | 6.75 | 6.75 | 6.75 | 6.82 | 6.89 | 6.96 | 6.96 | 7.03 | 7.08 | 7.15 | — | 8.42 | 8.44 | 8.47 |
| | 115 | TC | 40.6 | 41.1 | 42.0 | 42.4 | 42.0 | 42.4 | 42.9 | 43.3 | 45.1 | 45.4 | 45.6 | 45.9 | — | 48.9 | 49.2 | 49.3 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.62 | 0.85 | 1.00 | 1.00 | 0.40 | 0.60 | 0.79 | 0.99 | — | 0.39 | 0.58 | 0.76 |
| | | kW | 6.72 | 6.79 | 6.87 | 6.87 | 6.87 | 6.96 | 7.03 | 7.10 | 7.15 | 7.20 | 7.25 | 7.27 | — | 7.49 | 7.54 | 7.56 |
| 1,700 | 65 | TC | 51.3 | 51.8 | 53.1 | 53.6 | 53.1 | 53.6 | 54.2 | 54.7 | 56.8 | 57.1 | 57.6 | 58.1 | — | 68.5 | 69.0 | 69.5 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.63 | 0.86 | 1.00 | 1.00 | 0.39 | 0.58 | 0.76 | 0.94 | — | 0.39 | 0.54 | 0.69 |
| | | kW | 4.31 | 4.35 | 4.40 | 4.40 | 4.40 | 4.45 | 4.50 | 4.54 | 4.52 | 4.59 | 4.64 | 4.69 | — | 5.60 | 5.67 | 5.72 |
| | 75 | TC | 51.3 | 51.9 | 53.1 | 53.6 | 53.1 | 53.6 | 54.2 | 54.9 | 56.8 | 57.3 | 57.6 | 58.1 | — | 68.0 | 68.5 | 69.0 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.62 | 0.85 | 1.00 | 1.00 | 0.39 | 0.58 | 0.76 | 0.94 | — | 0.39 | 0.54 | 0.69 |
| | | kW | 4.71 | 4.76 | 4.81 | 4.81 | 4.81 | 4.86 | 4.90 | 4.95 | 4.95 | 5.00 | 5.07 | 5.12 | — | 5.88 | 5.96 | 6.00 |
| | 85 | TC | 50.5 | 51.0 | 52.1 | 52.8 | 52.1 | 52.8 | 53.2 | 53.9 | 55.8 | 56.3 | 56.6 | 57.1 | — | 66.2 | 66.7 | 67.2 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.63 | 0.86 | 1.00 | 1.00 | 0.39 | 0.58 | 0.76 | 0.95 | — | 0.39 | 0.54 | 0.70 |
| | | kW | 5.19 | 5.24 | 5.31 | 5.31 | 5.31 | 5.36 | 5.41 | 5.48 | 5.48 | 5.53 | 5.57 | 5.65 | — | 6.79 | 6.84 | 6.91 |
| | 95 | TC | 49.8 | 50.5 | 51.6 | 52.1 | 51.6 | 52.1 | 52.6 | 53.2 | 54.7 | 55.5 | 56.0 | 56.3 | — | 64.6 | 64.9 | 65.3 |
| | | S/T | 1.00 | 1.00 | 0.99 | 1.00 | 0.63 | 0.87 | 1.00 | 1.00 | 0.39 | 0.58 | 0.76 | 1.00 | — | 0.39 | 0.55 | 0.71 |
| | | kW | 6.17 | 6.24 | 6.32 | 6.32 | 6.32 | 6.36 | 6.43 | 6.51 | 6.53 | 6.58 | 6.65 | 6.70 | — | 7.99 | 8.06 | 8.11 |
| | 105 | TC | 48.5 | 49.2 | 50.3 | 50.8 | 50.3 | 50.8 | 51.3 | 51.9 | 53.6 | 54.2 | 54.5 | 55.0 | — | 59.9 | 59.9 | 60.2 |
| | | S/T | 0.99 | 1.00 | 0.99 | 1.00 | 0.63 | 0.87 | 1.00 | 1.00 | 0.39 | 0.59 | 0.78 | 1.00 | — | 0.39 | 0.57 | 0.74 |
| | | kW | 7.30 | 7.37 | 7.44 | 7.44 | 7.44 | 7.54 | 7.61 | 7.68 | 7.70 | 7.77 | 7.85 | 7.89 | — | 8.64 | 8.59 | 8.64 |
| | 115 | TC | 40.3 | 40.7 | 41.6 | 42.0 | 41.6 | 42.0 | 42.5 | 43.0 | 45.8 | 45.9 | 45.3 | 45.4 | — | 47.2 | 47.4 | 47.6 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.64 | 0.88 | 1.00 | 1.00 | 0.40 | 0.62 | 0.86 | 1.00 | — | 0.40 | 0.62 | 0.84 |
| | | kW | 6.84 | 6.91 | 6.98 | 6.98 | 6.98 | 7.06 | 7.13 | 7.20 | 7.32 | 7.37 | 7.34 | 7.39 | — | 7.46 | 7.49 | 7.51 |
| 1,900 | 65 | TC | 54.5 | 55.2 | 56.3 | 57.0 | 56.3 | 57.0 | 57.6 | 58.3 | 60.4 | 60.9 | 61.2 | 61.7 | — | 72.2 | 72.7 | 73.9 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.64 | 0.88 | 1.00 | 1.00 | 0.39 | 0.59 | 0.78 | 0.99 | — | 0.38 | 0.55 | 0.71 |
| | | kW | 5.05 | 5.10 | 5.14 | 5.14 | 5.14 | 5.21 | 5.26 | 5.31 | 5.31 | 5.36 | 5.43 | 5.48 | — | 6.41 | 6.46 | 6.12 |
| | 75 | TC | 54.7 | 55.4 | 56.6 | 57.1 | 56.6 | 57.1 | 57.8 | 58.4 | 60.7 | 61.0 | 61.5 | 62.0 | — | 74.0 | 74.3 | 74.5 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.63 | 0.88 | 1.00 | 1.00 | 0.39 | 0.59 | 0.78 | 1.00 | — | 0.38 | 0.55 | 0.71 |
| | | kW | 5.19 | 5.24 | 5.31 | 5.31 | 5.31 | 5.36 | 5.41 | 5.48 | 5.48 | 5.53 | 5.57 | 5.65 | — | 7.06 | 7.08 | 7.08 |
| | 85 | TC | 53.6 | 54.2 | 55.4 | 56.0 | 55.4 | 56.0 | 56.5 | 57.1 | 59.4 | 59.7 | 60.2 | 60.5 | — | 69.8 | 70.1 | 70.6 |
| | | S/T | 0.99 | 1.00 | 1.00 | 1.00 | 0.64 | 0.89 | 1.00 | 1.00 | 0.39 | 0.59 | 0.79 | 1.00 | — | 0.39 | 0.56 | 0.73 |
| | | kW | 5.86 | 5.91 | 5.98 | 5.98 | 5.98 | 6.05 | 6.10 | 6.17 | 6.20 | 6.24 | 6.29 | 6.34 | — | 7.54 | 7.61 | 7.65 |
| | 95 | TC | 52.3 | 52.8 | 53.9 | 54.5 | 53.9 | 54.5 | 55.2 | 55.7 | 57.9 | 58.3 | 58.6 | 59.1 | — | 66.4 | 66.7 | 66.7 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.64 | 0.90 | 1.00 | 1.00 | 0.39 | 0.60 | 0.80 | 1.00 | — | 0.39 | 0.57 | 0.75 |
| | | kW | 6.89 | 6.96 | 7.03 | 7.03 | 7.03 | 7.10 | 7.18 | 7.25 | 7.30 | 7.34 | 7.39 | 7.44 | — | 8.52 | 8.54 | 8.54 |
| | 105 | TC | 50.8 | 51.3 | 52.4 | 53.1 | 52.4 | 53.1 | 53.6 | 54.2 | 56.3 | 56.6 | 57.0 | 57.5 | — | 60.7 | 61.0 | 60.7 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.65 | 0.90 | 1.00 | 1.00 | 0.39 | 0.60 | 0.81 | 1.00 | — | 0.39 | 0.59 | 0.79 |
| | | kW | 8.04 | 8.11 | 8.20 | 8.20 | 8.20 | 8.30 | 8.37 | 8.47 | 8.52 | 8.59 | 8.64 | 8.71 | — | 8.95 | 8.99 | 8.85 |
| | 115 | TC | 40.6 | 40.9 | 41.9 | 42.4 | 41.9 | 42.4 | 42.9 | 43.2 | 45.1 | 45.3 | 45.4 | 45.8 | — | 48.4 | 48.5 | 48.7 |
| | | S/T | 1.00 | 1.00 | 1.00 | 1.00 | 0.66 | 1.00 | 1.00 | 1.00 | 0.40 | 0.66 | 0.93 | 1.00 | — | 0.40 | 0.65 | 0.90 |
| | | kW | 7.10 | 7.18 | 7.27 | 7.27 | 7.27 | 7.34 | 7.42 | 7.49 | 7.58 | 7.61 | 7.65 | 7.68 | — | 7.92 | 7.94 | 7.97 |

DUCT
WHM24-60DMA21S

# 4-2. Heating capacity

**NOTE:** Values mentioned in the table are calculated based on the maximum capacity.

## ■ Model: WHM24DMA21S

| AFR | CFM | 800 |
|---|---|---|

| Airflow (CFM) | ID (°F) | OD (°F) | 72 | 67 | 62 | 57 | 52 | 47 | 42 | 37 | 32 | 27 | 22 | 17 | 12 | 7 | 2 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 600 | 60 | TC | 28.3 | 28.3 | 28.2 | 28.2 | 28.1 | 27.1 | 24.9 | 23.0 | 21.4 | 21.4 | 20.1 | 19.2 | 18.0 | 16.7 | 15.6 | 14.6 |
| | | kW | 1.64 | 1.75 | 1.90 | 2.06 | 2.23 | 2.24 | 2.16 | 2.08 | 2.02 | 2.23 | 2.17 | 2.11 | 2.00 | 1.99 | 1.93 | 1.89 |
| | 70 | TC | 21.9 | 21.7 | 21.9 | 21.8 | 21.6 | 21.5 | 21.5 | 21.5 | 21.0 | 21.0 | 19.6 | 19.0 | 17.7 | 16.4 | 15.4 | 14.3 |
| | | kW | 1.23 | 1.29 | 1.42 | 1.52 | 1.63 | 1.77 | 1.95 | 2.13 | 2.21 | 2.42 | 2.35 | 2.28 | 2.20 | 2.14 | 2.08 | 2.02 |
| | 75 | TC | 18.4 | 18.3 | 18.3 | 18.3 | 18.3 | 18.3 | 18.1 | 18.1 | 18.1 | 18.1 | 18.1 | 18.0 | 16.7 | 15.4 | 14.1 | 13.0 |
| | | kW | 1.02 | 1.10 | 1.19 | 1.28 | 1.40 | 1.51 | 1.61 | 1.76 | 1.88 | 2.06 | 2.22 | 2.38 | 2.30 | 2.23 | 2.17 | 2.11 |
| | 80 | TC | 15.1 | 15.1 | 15.1 | 15.1 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 14.8 | 14.8 | 14.8 | 14.8 | 14.8 | 13.9 | 12.8 |
| | | kW | 0.85 | 0.90 | 0.98 | 1.06 | 1.14 | 1.23 | 1.32 | 1.47 | 1.56 | 1.65 | 1.78 | 1.92 | 2.08 | 2.26 | 2.26 | 2.20 |
| 800 | 60 | TC | 31.6 | 31.6 | 31.5 | 30.7 | 29.0 | 27.4 | 25.3 | 23.4 | 21.9 | 21.8 | 20.2 | 19.7 | 18.3 | 17.0 | 15.9 | 14.8 |
| | | kW | 1.94 | 2.05 | 2.22 | 2.28 | 2.22 | 2.20 | 2.13 | 2.06 | 2.02 | 2.21 | 2.15 | 2.10 | 2.05 | 1.99 | 1.94 | 1.90 |
| | 70 | TC | 24.5 | 24.3 | 24.1 | 24.1 | 24.1 | 24.0 | 23.9 | 22.8 | 21.4 | 21.3 | 19.9 | 19.4 | 17.9 | 16.6 | 15.6 | 14.5 |
| | | kW | 1.41 | 1.51 | 1.60 | 1.74 | 1.89 | 2.00 | 2.26 | 2.25 | 2.19 | 2.39 | 2.33 | 2.26 | 2.20 | 2.14 | 2.08 | 2.04 |
| | 75 | TC | 20.6 | 20.6 | 20.4 | 20.6 | 20.5 | 20.2 | 20.2 | 20.3 | 20.3 | 20.3 | 19.7 | 18.3 | 17.0 | 15.6 | 14.2 | 13.2 |
| | | kW | 1.19 | 1.26 | 1.35 | 1.48 | 1.56 | 1.68 | 1.85 | 2.02 | 2.16 | 2.37 | 2.43 | 2.36 | 2.29 | 2.23 | 2.17 | 2.11 |
| | 80 | TC | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.8 | 16.8 | 16.6 | 16.6 | 16.6 | 16.6 | 16.6 | 16.6 | 15.4 | 14.0 | 13.0 |
| | | kW | 0.98 | 1.04 | 1.13 | 1.21 | 1.30 | 1.40 | 1.54 | 1.63 | 1.74 | 1.89 | 2.05 | 2.20 | 2.38 | 2.32 | 2.25 | 2.20 |
| 1,000 | 60 | TC | 35.2 | 34.6 | 32.7 | 31.2 | 29.4 | 27.9 | 25.7 | 23.7 | 22.2 | 22.1 | 20.7 | 19.9 | 18.6 | 17.3 | 16.2 | 15.1 |
| | | kW | 2.28 | 2.33 | 2.28 | 2.26 | 2.21 | 2.20 | 2.13 | 2.08 | 2.03 | 2.23 | 2.17 | 2.13 | 2.08 | 2.03 | 1.98 | 1.95 |
| | 70 | TC | 27.0 | 27.0 | 27.0 | 27.0 | 26.9 | 26.9 | 25.1 | 23.2 | 21.7 | 21.7 | 20.3 | 19.6 | 18.3 | 17.0 | 15.9 | 14.8 |
| | | kW | 1.62 | 1.73 | 1.88 | 2.03 | 2.19 | 2.36 | 2.32 | 2.26 | 2.20 | 2.41 | 2.35 | 2.29 | 2.23 | 2.18 | 2.12 | 2.08 |
| | 75 | TC | 23.0 | 23.0 | 23.0 | 22.7 | 22.7 | 22.6 | 22.7 | 22.6 | 21.4 | 21.4 | 20.0 | 18.6 | 17.2 | 15.9 | 14.6 | 13.6 |
| | | kW | 1.38 | 1.47 | 1.59 | 1.67 | 1.80 | 1.95 | 2.14 | 2.32 | 2.30 | 2.51 | 2.44 | 2.38 | 2.32 | 2.26 | 2.20 | 2.16 |
| | 80 | TC | 19.0 | 18.9 | 18.9 | 18.9 | 18.9 | 18.8 | 18.6 | 18.6 | 18.6 | 18.6 | 18.6 | 18.3 | 17.0 | 15.7 | 14.3 | 13.3 |
| | | kW | 1.15 | 1.22 | 1.32 | 1.40 | 1.52 | 1.63 | 1.74 | 1.89 | 2.01 | 2.19 | 2.35 | 2.48 | 2.41 | 2.35 | 2.29 | 2.23 |

## ■ Model: WHM36DMA21S

| AFR | CFM | 1,120 |
|---|---|---|

| Airflow (CFM) | ID (°F) | OD (°F) | 72 | 67 | 62 | 57 | 52 | 47 | 42 | 37 | 32 | 27 | 22 | 17 | 12 | 7 | 2 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 600 | 60 | 43.0 | 43.0 | 42.9 | 42.9 | 42.8 | 41.2 | 37.9 | 35.0 | 32.5 | 32.6 | 30.6 | 29.3 | 27.4 | 25.4 | 23.7 | 22.1 | 43.0 |
| | | 2.62 | 2.80 | 3.04 | 3.30 | 3.56 | 3.58 | 3.45 | 3.33 | 3.24 | 3.56 | 3.46 | 3.37 | 3.30 | 3.19 | 3.09 | 3.03 | 2.62 |
| | 70 | 33.2 | 33.0 | 33.2 | 33.1 | 32.8 | 32.7 | 32.7 | 32.7 | 32.0 | 32.0 | 29.8 | 28.8 | 26.9 | 25.0 | 23.4 | 21.7 | 33.2 |
| | | 1.96 | 2.07 | 2.27 | 2.43 | 2.61 | 2.84 | 3.13 | 3.40 | 3.54 | 3.87 | 3.75 | 3.65 | 3.52 | 3.43 | 3.32 | 3.24 | 1.96 |
| | 75 | 28.0 | 27.9 | 27.9 | 27.9 | 27.9 | 27.9 | 27.5 | 27.5 | 27.5 | 27.5 | 27.5 | 27.4 | 25.4 | 23.4 | 21.4 | 19.8 | 28.0 |
| | | 1.64 | 1.76 | 1.90 | 2.05 | 2.24 | 2.42 | 2.57 | 2.82 | 3.01 | 3.30 | 3.55 | 3.80 | 3.68 | 3.57 | 3.46 | 3.37 | 1.64 |
| | 80 | 23.0 | 23.0 | 23.0 | 23.0 | 22.9 | 22.9 | 22.8 | 22.8 | 22.9 | 22.6 | 22.6 | 22.6 | 22.6 | 22.6 | 21.1 | 19.5 | 23.0 |
| | | 1.36 | 1.44 | 1.56 | 1.70 | 1.82 | 1.97 | 2.12 | 2.35 | 2.49 | 2.65 | 2.85 | 3.08 | 3.32 | 3.62 | 3.61 | 3.51 | 1.36 |
| 800 | 60 | 48.0 | 48.0 | 47.9 | 46.7 | 44.1 | 41.7 | 38.5 | 35.6 | 33.2 | 33.1 | 30.7 | 29.9 | 27.9 | 25.9 | 24.2 | 22.6 | 48.0 |
| | | 3.1 | 3.28 | 3.55 | 3.65 | 3.55 | 3.51 | 3.40 | 3.30 | 3.22 | 3.54 | 3.44 | 3.36 | 3.27 | 3.19 | 3.10 | 3.04 | 3.1 |
| | 70 | 37.2 | 37.0 | 36.7 | 36.7 | 36.7 | 36.5 | 36.4 | 34.7 | 32.5 | 32.4 | 30.3 | 29.6 | 27.3 | 25.3 | 23.7 | 22.0 | 37.2 |
| | | 2.26 | 2.42 | 2.56 | 2.78 | 3.02 | 3.20 | 3.61 | 3.60 | 3.50 | 3.83 | 3.73 | 3.62 | 3.52 | 3.43 | 3.33 | 3.26 | 2.26 |
| | 75 | 31.4 | 31.3 | 31.0 | 31.3 | 31.2 | 30.7 | 30.7 | 30.8 | 30.8 | 30.8 | 29.9 | 27.8 | 25.8 | 23.7 | 21.6 | 20.1 | 31.4 |
| | | 1.90 | 2.02 | 2.15 | 2.37 | 2.50 | 2.69 | 2.96 | 3.22 | 3.45 | 3.79 | 3.89 | 3.78 | 3.67 | 3.56 | 3.46 | 3.38 | 1.90 |
| | 80 | 25.7 | 25.7 | 25.7 | 25.7 | 25.7 | 25.6 | 25.6 | 25.3 | 25.3 | 25.2 | 25.3 | 25.3 | 25.3 | 23.4 | 21.3 | 19.8 | 25.7 |
| | | 1.56 | 1.66 | 1.80 | 1.94 | 2.08 | 2.24 | 2.47 | 2.61 | 2.79 | 3.03 | 3.27 | 3.51 | 3.80 | 3.72 | 3.60 | 3.51 | 1.56 |
| 1,000 | 60 | 53.5 | 52.7 | 49.7 | 47.5 | 44.8 | 42.5 | 39.0 | 36.1 | 33.8 | 33.7 | 31.5 | 30.3 | 28.3 | 26.3 | 24.6 | 23.0 | 53.5 |
| | | 3.65 | 3.73 | 3.65 | 3.62 | 3.54 | 3.51 | 3.40 | 3.32 | 3.25 | 3.56 | 3.48 | 3.40 | 3.33 | 3.25 | 3.18 | 3.12 | 3.65 |
| | 70 | 41.1 | 41.0 | 41.0 | 41.0 | 40.9 | 40.9 | 38.2 | 35.2 | 33.0 | 32.9 | 30.8 | 29.8 | 27.8 | 25.8 | 24.1 | 22.4 | 41.1 |
| | | 2.60 | 2.77 | 3.01 | 3.25 | 3.50 | 3.78 | 3.72 | 3.61 | 3.52 | 3.85 | 3.75 | 3.66 | 3.57 | 3.49 | 3.39 | 3.33 | 2.60 |
| | 75 | 35.0 | 34.9 | 34.9 | 34.5 | 34.5 | 34.4 | 34.5 | 34.4 | 32.6 | 32.5 | 30.4 | 28.3 | 26.2 | 24.1 | 22.2 | 20.7 | 35.0 |
| | | 2.21 | 2.35 | 2.55 | 2.67 | 2.89 | 3.13 | 3.43 | 3.72 | 3.68 | 4.02 | 3.91 | 3.81 | 3.72 | 3.62 | 3.52 | 3.45 | 2.21 |
| | 80 | 28.8 | 28.7 | 28.7 | 28.7 | 28.7 | 28.6 | 28.2 | 28.2 | 28.3 | 28.2 | 28.2 | 27.9 | 25.9 | 23.8 | 21.8 | 20.2 | 28.8 |
| | | 1.84 | 1.95 | 2.11 | 2.24 | 2.43 | 2.61 | 2.78 | 3.02 | 3.21 | 3.50 | 3.75 | 3.97 | 3.86 | 3.77 | 3.66 | 3.57 | 1.84 |

DUCT
WHM24-60DMA21S

# ■ Model: WHM48DMA21S

| AFR | CFM | 1,588 |
|---|---|---|

| Airflow (CFM) | ID (°F) | OD (°F) | 72 | 67 | 62 | 57 | 52 | 47 | 42 | 37 | 32 | 27 | 22 | 17 | 12 | 7 | 2 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,360 | 60 | TC | 56.6 | 56.6 | 56.4 | 56.4 | 56.3 | 54.2 | 49.8 | 46.1 | 42.8 | 42.9 | 40.3 | 38.5 | 36.0 | 33.4 | 31.2 | 29.1 |
| | | kW | 3.49 | 3.73 | 4.05 | 4.39 | 4.74 | 4.77 | 4.60 | 4.44 | 4.31 | 4.74 | 4.61 | 4.48 | 4.40 | 4.24 | 4.12 | 4.04 |
| | 70 | TC | 43.7 | 43.4 | 43.7 | 43.6 | 43.2 | 43.0 | 43.0 | 43.0 | 42.1 | 42.1 | 39.2 | 37.9 | 35.3 | 32.8 | 30.8 | 28.6 |
| | | kW | 2.61 | 2.75 | 3.03 | 3.24 | 3.48 | 3.78 | 4.16 | 4.53 | 4.71 | 5.16 | 5.00 | 4.85 | 4.69 | 4.56 | 4.42 | 4.31 |
| | 75 | TC | 36.8 | 36.7 | 36.7 | 36.7 | 36.7 | 36.7 | 36.1 | 36.1 | 36.1 | 36.1 | 36.1 | 36.0 | 33.4 | 30.8 | 28.1 | 26.1 |
| | | kW | 2.18 | 2.34 | 2.53 | 2.72 | 2.98 | 3.22 | 3.43 | 3.75 | 4.00 | 4.39 | 4.72 | 5.06 | 4.90 | 4.76 | 4.61 | 4.48 |
| | 80 | TC | 30.2 | 30.2 | 30.2 | 30.2 | 30.1 | 30.1 | 29.9 | 29.9 | 30.1 | 29.7 | 29.7 | 29.7 | 29.7 | 29.7 | 27.7 | 25.7 |
| | | kW | 1.81 | 1.92 | 2.08 | 2.26 | 2.42 | 2.63 | 2.82 | 3.12 | 3.32 | 3.52 | 3.80 | 4.10 | 4.42 | 4.82 | 4.80 | 4.68 |
| 1,560 | 60 | TC | 63.2 | 63.2 | 63.0 | 61.4 | 57.9 | 54.9 | 50.6 | 46.8 | 43.7 | 43.6 | 40.4 | 39.3 | 36.7 | 34.1 | 31.9 | 29.7 |
| | | kW | 4.13 | 4.37 | 4.72 | 4.85 | 4.72 | 4.68 | 4.53 | 4.39 | 4.29 | 4.71 | 4.58 | 4.47 | 4.36 | 4.24 | 4.13 | 4.05 |
| | 70 | TC | 49.0 | 48.7 | 48.3 | 48.3 | 48.3 | 48.0 | 47.9 | 45.7 | 42.8 | 42.6 | 39.9 | 38.9 | 35.9 | 33.2 | 31.2 | 29.0 |
| | | kW | 3.01 | 3.22 | 3.41 | 3.70 | 4.02 | 4.26 | 4.80 | 4.79 | 4.66 | 5.09 | 4.96 | 4.82 | 4.69 | 4.56 | 4.44 | 4.34 |
| | 75 | TC | 41.2 | 41.1 | 40.8 | 41.1 | 41.0 | 40.4 | 40.4 | 40.6 | 40.6 | 40.6 | 39.3 | 36.6 | 33.9 | 31.2 | 28.4 | 26.5 |
| | | kW | 2.53 | 2.69 | 2.87 | 3.15 | 3.33 | 3.59 | 3.94 | 4.29 | 4.60 | 5.04 | 5.17 | 5.03 | 4.88 | 4.74 | 4.61 | 4.50 |
| | 80 | TC | 33.8 | 33.8 | 33.8 | 33.8 | 33.8 | 33.7 | 33.7 | 33.2 | 33.2 | 33.1 | 33.2 | 33.2 | 33.2 | 30.8 | 28.0 | 26.1 |
| | | kW | 2.08 | 2.21 | 2.40 | 2.58 | 2.77 | 2.98 | 3.28 | 3.48 | 3.72 | 4.04 | 4.36 | 4.68 | 5.06 | 4.95 | 4.79 | 4.68 |
| 1,760 | 60 | TC | 70.3 | 69.2 | 65.4 | 62.5 | 58.9 | 55.9 | 51.3 | 47.4 | 44.4 | 44.3 | 41.4 | 39.9 | 37.2 | 34.6 | 32.4 | 30.2 |
| | | kW | 4.85 | 4.96 | 4.85 | 4.82 | 4.71 | 4.68 | 4.53 | 4.42 | 4.32 | 4.74 | 4.63 | 4.53 | 4.44 | 4.32 | 4.23 | 4.15 |
| | 70 | TC | 54.1 | 53.9 | 53.9 | 53.9 | 53.8 | 53.8 | 50.2 | 46.3 | 43.4 | 43.3 | 40.6 | 39.2 | 36.6 | 33.9 | 31.7 | 29.5 |
| | | kW | 3.46 | 3.68 | 4.00 | 4.32 | 4.66 | 5.03 | 4.95 | 4.80 | 4.69 | 5.12 | 5.00 | 4.87 | 4.76 | 4.64 | 4.52 | 4.44 |
| | 75 | TC | 46.1 | 45.9 | 45.9 | 45.4 | 45.4 | 45.2 | 45.4 | 45.2 | 42.9 | 42.8 | 40.0 | 37.2 | 34.5 | 31.7 | 29.2 | 27.2 |
| | | kW | 2.95 | 3.12 | 3.40 | 3.56 | 3.84 | 4.16 | 4.56 | 4.95 | 4.90 | 5.35 | 5.20 | 5.08 | 4.95 | 4.82 | 4.69 | 4.60 |
| | 80 | TC | 37.9 | 37.8 | 37.8 | 37.8 | 37.8 | 37.7 | 37.1 | 37.1 | 37.2 | 37.1 | 37.1 | 36.7 | 34.1 | 31.3 | 28.7 | 26.6 |
| | | kW | 2.45 | 2.59 | 2.80 | 2.98 | 3.24 | 3.48 | 3.70 | 4.02 | 4.28 | 4.66 | 5.00 | 5.28 | 5.14 | 5.01 | 4.87 | 4.76 |

# ■ Model: WHM60DMA21S

| AFR | CFM | 1,706 |
|---|---|---|

| Airflow (CFM) | ID (°F) | OD (°F) | 72 | 67 | 62 | 57 | 52 | 47 | 42 | 37 | 32 | 27 | 22 | 17 | 12 | 7 | 2 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,500 | 60 | TC | 66.0 | 66.0 | 65.8 | 65.8 | 65.7 | 63.2 | 58.1 | 53.7 | 49.9 | 50.0 | 47.0 | 44.9 | 42.0 | 38.9 | 36.4 | 34.0 |
| | | kW | 4.34 | 4.63 | 5.03 | 5.45 | 5.89 | 5.93 | 5.71 | 5.51 | 5.35 | 5.89 | 5.73 | 5.57 | 5.40 | 5.27 | 5.11 | 5.01 |
| | 70 | TC | 51.0 | 50.7 | 51.0 | 50.9 | 50.4 | 50.2 | 50.2 | 50.2 | 49.1 | 49.1 | 45.7 | 44.3 | 41.2 | 38.3 | 35.9 | 33.3 |
| | | kW | 3.24 | 3.42 | 3.76 | 4.02 | 4.32 | 4.69 | 5.17 | 5.63 | 5.85 | 6.40 | 6.20 | 6.03 | 5.83 | 5.67 | 5.49 | 5.35 |
| | 75 | TC | 43.0 | 42.8 | 42.8 | 42.8 | 42.8 | 42.8 | 42.2 | 42.2 | 42.2 | 42.2 | 42.2 | 42.0 | 38.9 | 35.9 | 32.8 | 30.4 |
| | | kW | 2.70 | 2.90 | 3.14 | 3.38 | 3.70 | 4.00 | 4.26 | 4.65 | 4.97 | 5.45 | 5.87 | 6.28 | 6.09 | 5.91 | 5.73 | 5.57 |
| | 80 | TC | 35.2 | 35.2 | 35.2 | 35.2 | 35.1 | 35.1 | 34.9 | 34.9 | 35.1 | 34.6 | 34.6 | 34.6 | 34.6 | 34.6 | 32.3 | 29.9 |
| | | kW | 2.25 | 2.39 | 2.59 | 2.80 | 3.00 | 3.26 | 3.50 | 3.88 | 4.12 | 4.38 | 4.71 | 5.09 | 5.49 | 5.99 | 5.97 | 5.81 |
| 1,700 | 60 | TC | 73.7 | 73.7 | 73.5 | 71.6 | 67.6 | 64.0 | 59.1 | 54.6 | 51.0 | 50.9 | 47.1 | 45.9 | 42.8 | 39.7 | 37.2 | 34.6 |
| | | kW | 5.13 | 5.43 | 5.87 | 6.03 | 5.87 | 5.81 | 5.63 | 5.45 | 5.33 | 5.85 | 5.69 | 5.55 | 5.41 | 5.27 | 5.13 | 5.03 |
| | 70 | TC | 57.1 | 56.8 | 56.3 | 56.3 | 56.3 | 56.0 | 55.8 | 53.3 | 49.9 | 49.7 | 46.5 | 45.4 | 41.8 | 38.8 | 36.4 | 33.8 |
| | | kW | 3.74 | 4.00 | 4.24 | 4.59 | 4.99 | 5.29 | 5.97 | 5.95 | 5.79 | 6.32 | 6.17 | 5.99 | 5.83 | 5.67 | 5.51 | 5.39 |
| | 75 | TC | 48.1 | 48.0 | 47.6 | 48.0 | 47.8 | 47.1 | 47.1 | 47.3 | 47.3 | 47.3 | 45.9 | 42.6 | 39.6 | 36.4 | 33.1 | 30.9 |
| | | kW | 3.14 | 3.34 | 3.56 | 3.92 | 4.14 | 4.45 | 4.89 | 5.33 | 5.71 | 6.26 | 6.42 | 6.24 | 6.07 | 5.89 | 5.73 | 5.59 |
| | 80 | TC | 39.4 | 39.4 | 39.4 | 39.4 | 39.4 | 39.3 | 39.3 | 38.8 | 38.8 | 38.6 | 38.8 | 38.8 | 38.8 | 35.9 | 32.7 | 30.4 |
| | | kW | 2.59 | 2.74 | 2.98 | 3.20 | 3.44 | 3.70 | 4.08 | 4.32 | 4.61 | 5.01 | 5.41 | 5.81 | 6.28 | 6.15 | 5.95 | 5.81 |
| 1,900 | 60 | TC | 82.1 | 80.8 | 76.3 | 72.9 | 68.7 | 65.2 | 59.9 | 55.4 | 51.8 | 51.7 | 48.3 | 46.5 | 43.4 | 40.4 | 37.8 | 35.2 |
| | | kW | 6.03 | 6.17 | 6.03 | 5.99 | 5.85 | 5.81 | 5.63 | 5.49 | 5.37 | 5.89 | 5.75 | 5.63 | 5.51 | 5.37 | 5.25 | 5.15 |
| | 70 | TC | 63.1 | 62.9 | 62.9 | 62.9 | 62.8 | 62.8 | 58.6 | 54.1 | 50.7 | 50.5 | 47.3 | 45.7 | 42.6 | 39.6 | 37.0 | 34.4 |
| | | kW | 4.30 | 4.57 | 4.97 | 5.37 | 5.79 | 6.24 | 6.15 | 5.97 | 5.83 | 6.36 | 6.20 | 6.05 | 5.91 | 5.77 | 5.61 | 5.51 |
| | 75 | TC | 53.7 | 53.6 | 53.6 | 52.9 | 52.9 | 52.8 | 52.9 | 52.8 | 50.0 | 49.9 | 46.7 | 43.4 | 40.2 | 37.0 | 34.1 | 31.7 |
| | | kW | 3.66 | 3.88 | 4.22 | 4.41 | 4.77 | 5.17 | 5.67 | 6.15 | 6.09 | 6.64 | 6.46 | 6.30 | 6.15 | 5.99 | 5.83 | 5.71 |
| | 80 | TC | 44.3 | 44.1 | 44.1 | 44.1 | 44.1 | 43.9 | 43.3 | 43.3 | 43.4 | 43.3 | 43.3 | 42.8 | 39.7 | 36.5 | 33.5 | 31.1 |
| | | kW | 3.04 | 3.22 | 3.48 | 3.70 | 4.02 | 4.32 | 4.59 | 4.99 | 5.31 | 5.79 | 6.20 | 6.56 | 6.38 | 6.22 | 6.05 | 5.91 |

DUCT
WHM24-60DMA21S

# 5. Fan performance

## 5-1. Blower data

Airflow performance data is based on cooling performance with a coil and no filter in place. Check the performance table for appropriate unit size selection. External static pressure should stay within the minimum and maximum limits shown in the table below to ensure proper cooling, heating, and electric heating operation.

**NOTES:**

- Required 350-450 CFM/Ton range.
- When there is an electric heater, set the fan speed based on the air volume that the electric heater needs (not less than 350 CFM/Ton).
- Airflow based upon air handler unit operates at 230 V with no electric heater kit and no filter. Airflow at 208 V is approximately the same as 230 V.

### ■ Model: WHM24DMA21S

| Fan speed | | External static pressure in.H2O [KPa] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 (0) | 0.1 (0.02) | 0.18 (0.045) | 0.3 (0.07) | 0.4 (0.1) | 0.5 (0.12) | 0.6 (0.15) | 0.7 (0.17) | 0.8 (0.20) |
| Tap (2) Default setting | CFM | 815 | 792 | 752 | 709 | — | — | — | — | — |
| | W | 94 | 102 | 110 | 123 | — | — | — | — | — |
| Tap (3) | CFM | 862 | 828 | 792 | 735 | 705 | — | — | — | — |
| | W | 106 | 114 | 125 | 137 | 145 | — | — | — | — |
| Tap (4) | CFM | — | — | — | 859 | 853 | 803 | 769 | 735 | — |
| | W | — | — | — | 178 | 185 | 193 | 203 | 213 | — |
| Tap (5) | CFM | — | — | — | — | — | 895 | 864 | 825 | 779 |
| | W | — | — | — | — | — | 241 | 251 | 258 | 267 |

### ■ Model: WHM36DMA21S

| Fan speed | | External static pressure in.H2O [KPa] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 (0) | 0.1 (0.02) | 0.18 (0.045) | 0.3 (0.07) | 0.4 (0.1) | 0.5 (0.12) | 0.6 (0.15) | 0.7 (0.17) | 0.8 (0.20) |
| Tap (2) Default setting | CFM | 1,264 | 1,216 | 1,172 | 1,135 | 1,096 | — | — | — | — |
| | W | 215 | 222 | 233 | 238 | 244 | — | — | — | — |
| Tap (3) | CFM | 1,350 | 1,314 | 1,269 | 1,206 | 1,116 | 1,082 | 1,050 | — | — |
| | W | 257 | 264 | 274 | 282 | 292 | 297 | 302 | — | — |
| Tap (4) | CFM | — | — | — | 1,323 | 1,266 | 1,192 | 1,122 | 1,060 | — |
| | W | — | — | — | 304 | 313 | 323 | 333 | 340 | — |
| Tap (5) | CFM | — | — | — | — | 1,350 | 1,292 | 1,221 | 1,148 | 1,088 |
| | W | — | — | — | — | 371 | 381 | 394 | 401 | 406 |

DUCT
WHM24-60DMA21S

## ■ Model: WHM48DMA21S

| Fan speed | | External static pressure in.H2O [KPa] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 (0) | 0.1 (0.02) | 0.18 (0.045) | 0.3 (0.07) | 0.4 (0.1) | 0.5 (0.12) | 0.6 (0.15) | 0.7 (0.17) | 0.8 (0.20) |
| Tap (2) Default setting | CFM | 1,756 | 1,701 | 1,626 | 1,579 | 1,520 | 1,468 | 1,425 | — | — |
| | W | 348 | 357 | 369 | 378 | 387 | 395 | 407 | — | — |
| Tap (3) | CFM | 1,799 | 1,746 | 1,678 | 1,634 | 1,571 | 1,522 | 1,449 | 1,402 | — |
| | W | 366 | 377 | 388 | 398 | 410 | 419 | 428 | 444 | — |
| Tap (4) | CFM | — | 1,794 | 1,749 | 1,719 | 1,670 | 1,633 | 1,589 | 1,553 | 1,510 |
| | W | — | 387 | 401 | 413 | 428 | 437 | 452 | 465 | 482 |
| Tap (5) | CFM | — | — | — | 1,782 | 1,735 | 1,701 | 1,665 | 1,626 | 1,585 |
| | W | — | — | — | 456 | 469 | 481 | 495 | 510 | 525 |

## ■ Model: WHM60DMA21S

| Fan speed | | External static pressure in.H2O [KPa] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 (0) | 0.1 (0.02) | 0.18 (0.045) | 0.3 (0.07) | 0.4 (0.1) | 0.5 (0.12) | 0.6 (0.15) | 0.7 (0.17) | 0.8 (0.20) |
| Tap (2) Default setting | CFM | 1,838 | 1,810 | 1,770 | 1,760 | — | — | — | — | — |
| | W | 376 | 387 | 401 | 413 | — | — | — | — | — |
| Tap (3) | CFM | 1,888 | 1,855 | 1,813 | 1,782 | 1,751 | — | — | — | — |
| | W | 415 | 428 | 445 | 456 | 469 | — | — | — | — |
| Tap (4) | CFM | 1,971 | 1,941 | 1,893 | 1,864 | 1,820 | 1,786 | 1,755 | — | — |
| | W | 472 | 485 | 501 | 513 | 530 | 540 | 558 | — | — |
| Tap (5) | CFM | 2,056 | 2,022 | 1,978 | 1,950 | 1,907 | 1,878 | 1,826 | 1,801 | 1,750 |
| | W | 533 | 545 | 562 | 575 | 592 | 603 | 619 | 631 | 638 |

DUCT
WHM24-60DMA21S

# 5-2. Airflow

Conversion factor:

- 1 $m^3/h$ = 0.2778 l/s = 0.5886 CFM
- 3.6 $m^3/h$ = 1 l/s
- 1.699 $m^3/h$ = 1 CFM

## ■ Model: WHM24DMA21S

### ● Cooling

| Airflow | |
|---|---|
| $m^3/h$ | 1,360 |
| l/s | 378 |
| CFM | 800 |

### ● Heating

| Airflow | |
|---|---|
| $m^3/h$ | 1,360 |
| l/s | 378 |
| CFM | 800 |

## ■ Model: WHM36DMA21S

### ● Cooling

| Airflow | |
|---|---|
| $m^3/h$ | 1,905 |
| l/s | 529 |
| CFM | 1,120 |

### ● Heating

| Airflow | |
|---|---|
| $m^3/h$ | 1,905 |
| l/s | 529 |
| CFM | 1,120 |

DUCT
WHM24-60DMA21S

# ■ Model: WHM48DMA21S

## ● Cooling

| Airflow | |
|---|---|
| $m^3/h$ | 2,700 |
| l/s | 750 |
| CFM | 1,588 |

## ● Heating

| Airflow | |
|---|---|
| $m^3/h$ | 2,700 |
| l/s | 750 |
| CFM | 1,588 |

# ■ Model: WHM60DMA21S

## ● Cooling

| Airflow | |
|---|---|
| $m^3/h$ | 2,900 |
| l/s | 806 |
| CFM | 1,706 |

## ● Heating

| Airflow | |
|---|---|
| $m^3/h$ | 2,900 |
| l/s | 806 |
| CFM | 1,706 |

DUCT
WHM24-60DMA21S

# 6. Electrical characteristics

If you use the optional heater kit, make sure if it is suitable for the 3-way installation of the AHU.

| Air handler model | Heater kit model name | Electric heat (kW) | MCA*1 (A) | | MAX. CKT. BKR*2 (A) | | Fan speed tap | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | AC 230 V | AC 208 V | AC 230 V | AC 208 V | 2 | 3 | 4 | 5 |
| 24K | 2105340 | 5 | 28.3 | 25.9 | 30 | 30 | ● | ● | ● | ● |
| | 2105342 | 7.5 | 40.7 | 37.2 | 45 | 40 | — | ● | ● | ● |
| | 2105343 | 10 | 53.2 | 48.5 | 60 | 50 | — | — | ● | ● |
| 36K | 2105340 | 5 | 29.8 | 27.4 | 30 | 30 | ● | ● | ● | ● |
| | 2105342 | 7.5 | 42.2 | 38.7 | 45 | 40 | — | ● | ● | ● |
| | 2105343 | 10 | 54.7 | 49.9 | 60 | 50 | — | — | ● | ● |
| | 2105344 | 15 | 42.2 + 36.9 | 38.6 + 33.8 | 45 + 40 | 40 + 35 | — | — | — | ● |
| 48K, 60K | 2105340 | 5 | 31.8 | 29.4 | 35 | 30 | ● | ● | ● | ● |
| | 2105342 | 7.5 | 44.8 | 40.7 | 45 | 45 | — | ● | ● | ● |
| | 2105343 | 10 | 56.7 | 51.9 | 60 | 55 | — | — | ● | ● |
| | 2105344 | 15 | 44.8 + 36.9 | 40.7 + 33.8 | 50 + 40 | 50 + 35 | — | — | ● | ● |
| | 2105345 | 20 | 56.7 + 49.9 | 51.9 + 45.2 | 60 + 50 | 60 + 50 | — | — | — | ● |

- ●: available
- —: unavailable

**NOTES:**

- As the wire size and circuit breaker regulations differ in each country or region, select appropriate devices comply with the regional standard.
- Fan speed selection:
  - 2: Medium low
  - 3: Medium
  - 4: Medium high
  - 5: High
- Connect the heater kit to the power supply separately.
- Ampacities for MCA*1 and MAX. CKT. BKR*2 include the blower motor.
- Heat pump systems require specified airflow. Each ton of cooling requires between 350 and 450 CFM/Ton, or 400 CFM/Ton usually.

*1: Minimum Circuit Ampacity (Calculation based on UL60335-2-40)

*2: Maximum Circuit Breaker

DUCT
WHM24-60DMA21S

# 7. Accessories

| Part name | Q'ty | Part name | Q'ty |
|---|---|---|---|
| Use and installation instructions | 1 | Warranty card | 1 |

DUCT
WHM24-60DMA21S

# Part 2. OUTDOOR UNIT

**SINGLE TYPE:**

**WHM24SZA21S**
**WHM36SZA21S**
**WHM48SZA21S**
**WHM60SZA21S**

# 1. Specifications

| Type | | | | Inverter heat pump | | | |
|---|---|---|---|---|---|---|---|
| **Model name** | | | | **WHM24SZA21S** | **WHM36SZA21S** | **WHM48SZA21S** | **WHM60SZA21S** |
| Power supply | | | | 208/230 V ~ 60 Hz | | | |
| Available voltage range | | | | 198—253 V | | | |
| Fan | Airflow rate | | CFM ($m^3$/h) | 1,825 (3,150) | 2,350 (3,995) | 3,525 (6,000) | |
| | Type × Q'ty | | | Propeller fan × 1 | | Propeller fan × 2 | |
| | Motor output | | W | 60 | 121 | | |
| Sound pressure level *1 | | | dB (A) | 54 | 57 | 59 | 60 |
| Heat exchanger type | | Dimensions (H × W × D) | in (mm) | 35-5/8 × 25-1/4 × 7/8 (900 × 630 × 21.7) 34 × 25-1/4 × 7/8 (866 × 630 × 21.7) | 38-3/16 × 31-3/8 × 1-11/16 (970 × 798 × 43.3) | 38-3/16 × 53 × 1-7/16 (970 × 1,344 × 36.4) | 38-3/16 × 53 × 1-11/16 (970 × 1,344 × 43.3) |
| | | Fin pitch | FPI | 18 | 19 | 17 | 18 |
| | | Rows × Stages | | 2 × 30 | 2 × 38 | 2 × 64 | |
| | | Pipe type | | Copper | | | |
| | | Fin type | Type (Material) | Aluminum | | | |
| | | | Surface treatment | Blue fin | | | |
| Compressor | Type | | | Rotary | | | |
| Refrigerant | | Type | | R410A | | | |
| | | Charge | lb oz | 4 lb 7 oz | 6 lb 3 oz | 8 lb 15 oz | |
| | | | g | 2,000 | 2,800 | 4,050 | |
| Refrigerant oil | | Type | | VG74 | | | |
| Enclosure | | Material | | Steel sheet | | | |
| | | Color | | White | | | |
| Dimensions (H × W × D) | Net | | in (mm) | 26-3/8 × 33-7/8 × 12-1/4 (670 × 860 × 310) | 33 × 37-3/8 × 13-3/8 (840 × 950 × 340) | 54-5/8 × 37-3/8 × 13-3/8 (1,386 × 950 × 340) | |
| | Gross | | | 28-3/4 × 39 × 1-3/4 (730 × 990 × 450) | 36-1/4 × 43-3/4 × 18-1/8 (920 × 1,110 × 460) | 60-1/4 × 43-3/4 × 18-1/8 (1,530 × 1,110 × 460) | |
| Weight | Net | | lb (kg) | 112.4 (51) | 147.7 (67) | 227.1 (103) | 251.3 (114) |
| | Gross | | | 121.3 (55) | 158.7 (72) | 253.5 (115) | 277.5 (126) |
| Connection pipe | Size | Liquid | in (mm) | Ø3/8 (Ø9.52) | | | |
| | | Gas | | Ø5/8 (Ø15.88) | Ø3/4 (Ø19.05) | Ø7/8 (Ø22.22) | |
| | Method | | | Flare | | | |
| | Pre-charge length | | ft (m) | 24.6 (7.5) | | | |
| | Max. length | | | 164 (50) | 246 (75) | | |
| | Max. height difference | | | Indoor unit higher than outdoor unit: 98 (30) Outdoor unit higher than indoor unit: 98 (30) | | | |
| Operation range | | Cooling | °F (°C) | 5 to 122 (-15 to 50) | | | |
| | | Heating | | -13 to 75 (-25 to 24) | | | |

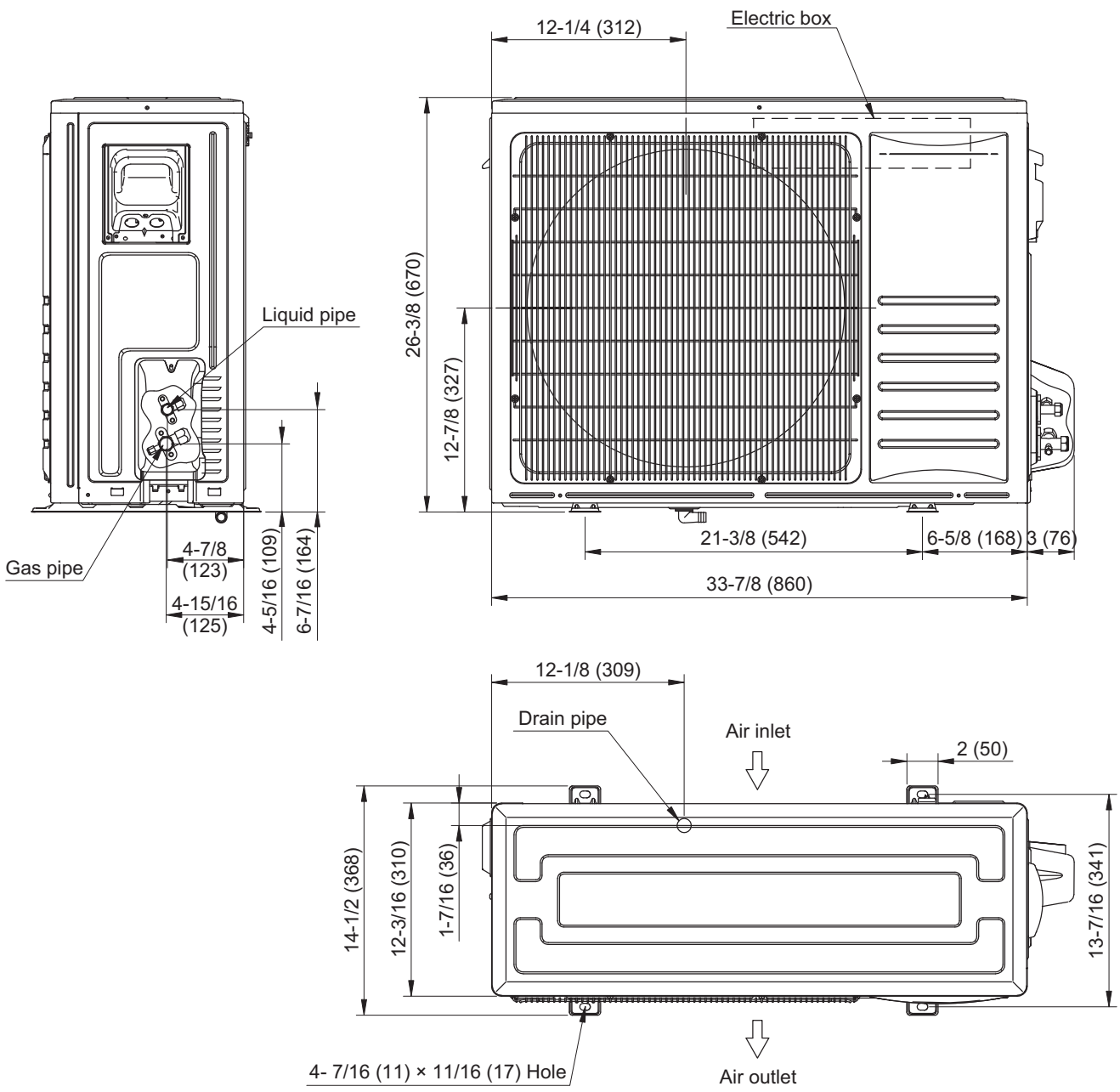
**NOTES:**

- Specifications are based on the following conditions:
  - Cooling: Indoor temperature of 80 °FDB (26.67 °CDB)/67 °FWB (19.44 °CWB), and outdoor temperature of 95 °FDB (35 °CDB)/75 °FWB (23.9 °CWB).
  - Heating: Indoor temperature of 70 °FDB (21.11 °CDB)/59 °FWB (15 °CWB), and outdoor temperature of 47 °FDB (8.33 °CDB)/43 °FWB (6.11 °CWB).
  - Pipe length: 24 ft 6 in (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- *1: Sound pressure level
  - Measured values in manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

# 2. Dimensions

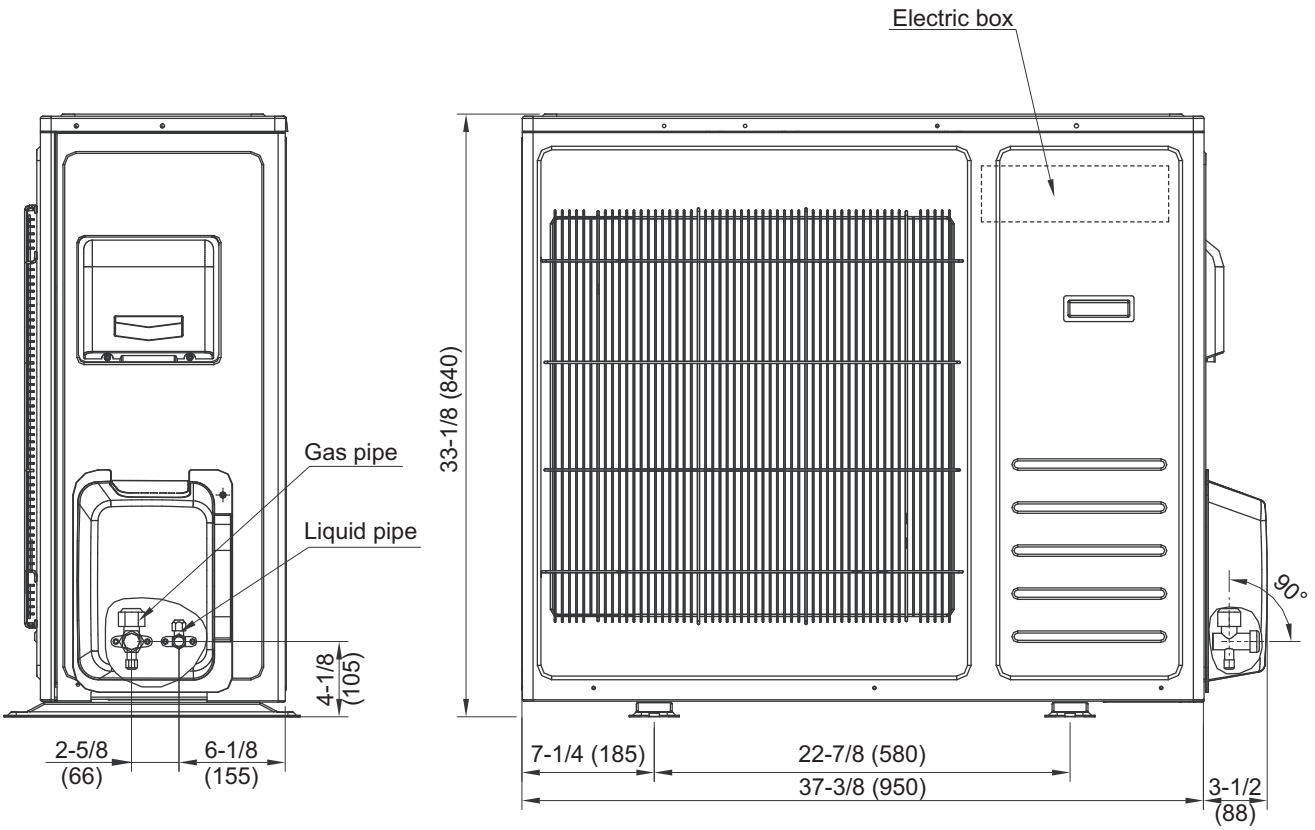
## 2-1. Model: WHM24SZA21S

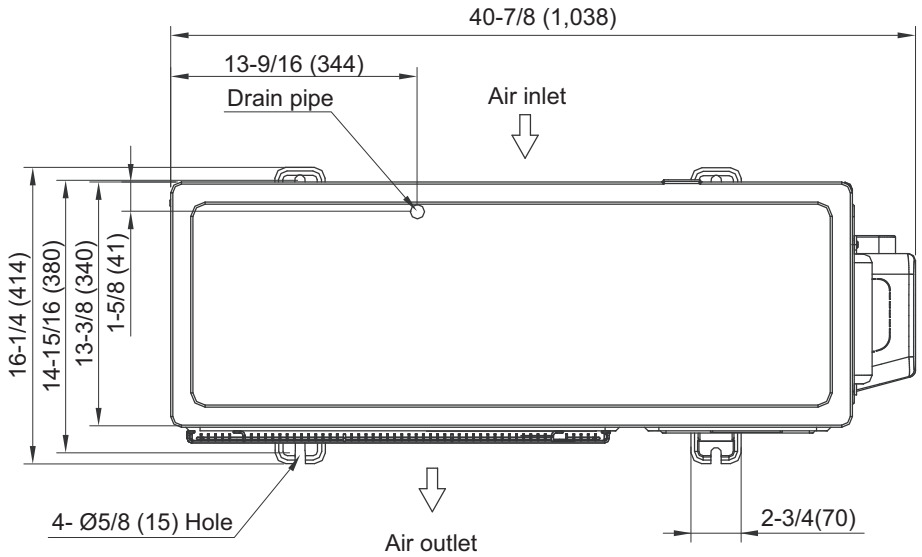
Unit: in (mm)



# 2-2. Model: WHM36SZA21S

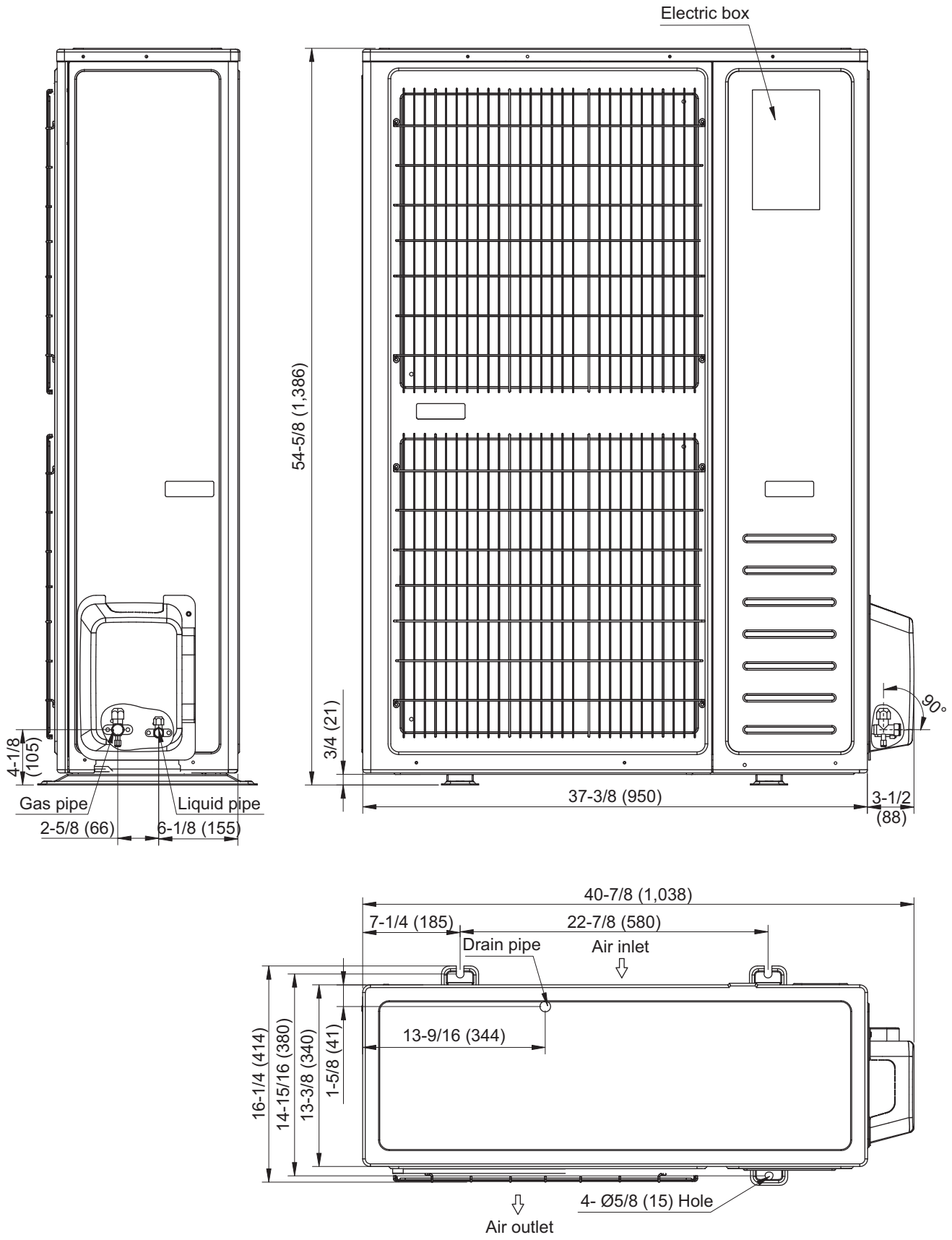
Unit: in (mm)



# 2-3. Models: WHM48SZA21S and WHM60SZA21S

Unit: in (mm)



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# 3. Installation space

## 3-1. Models: WHM24SZA21S, WHM36SZA21S, WHM48SZA21S, and WHM60SZA21S

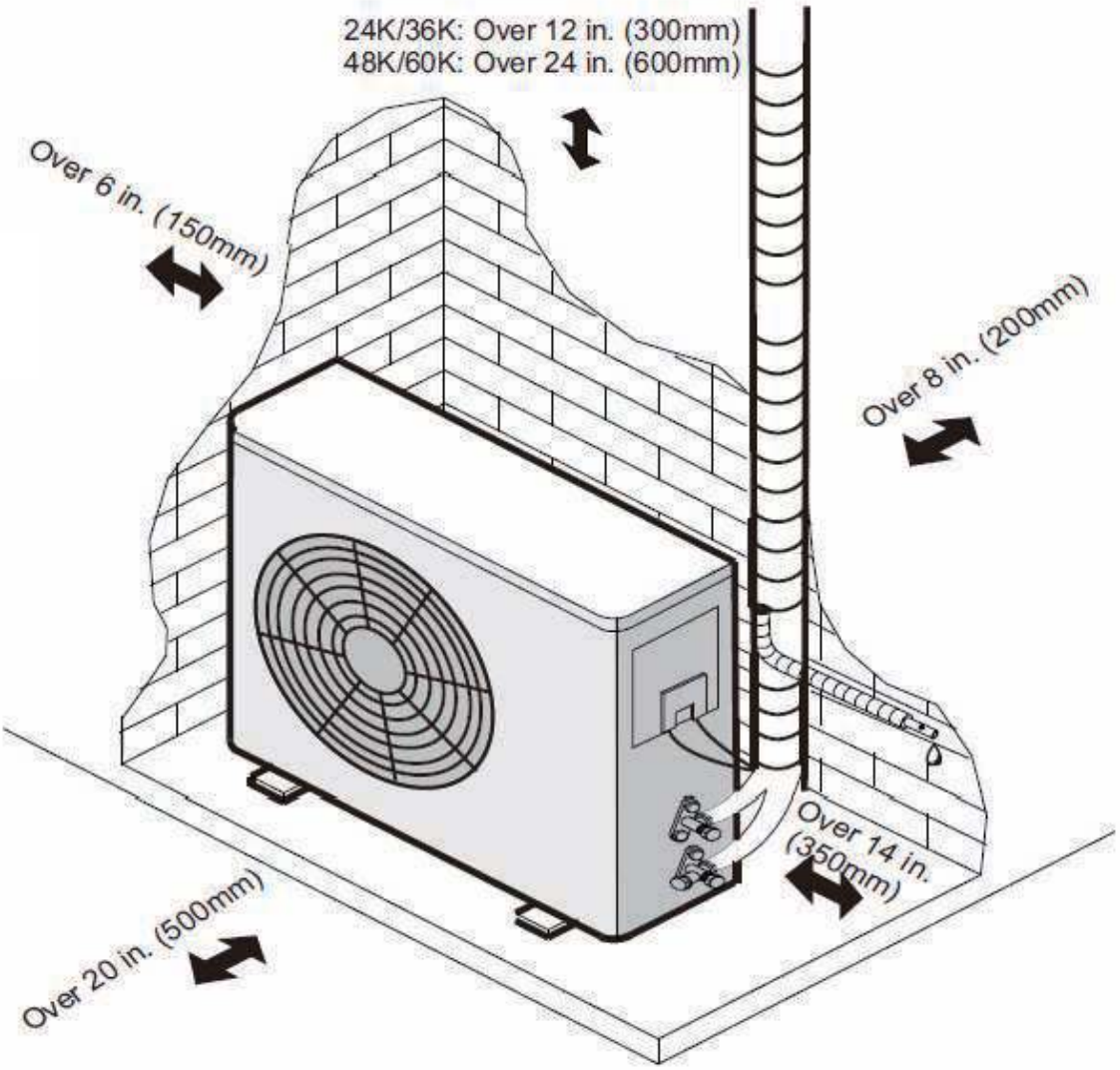
### ■ Space requirement

Provide sufficient installation space for product safety.

**⚠ CAUTION**

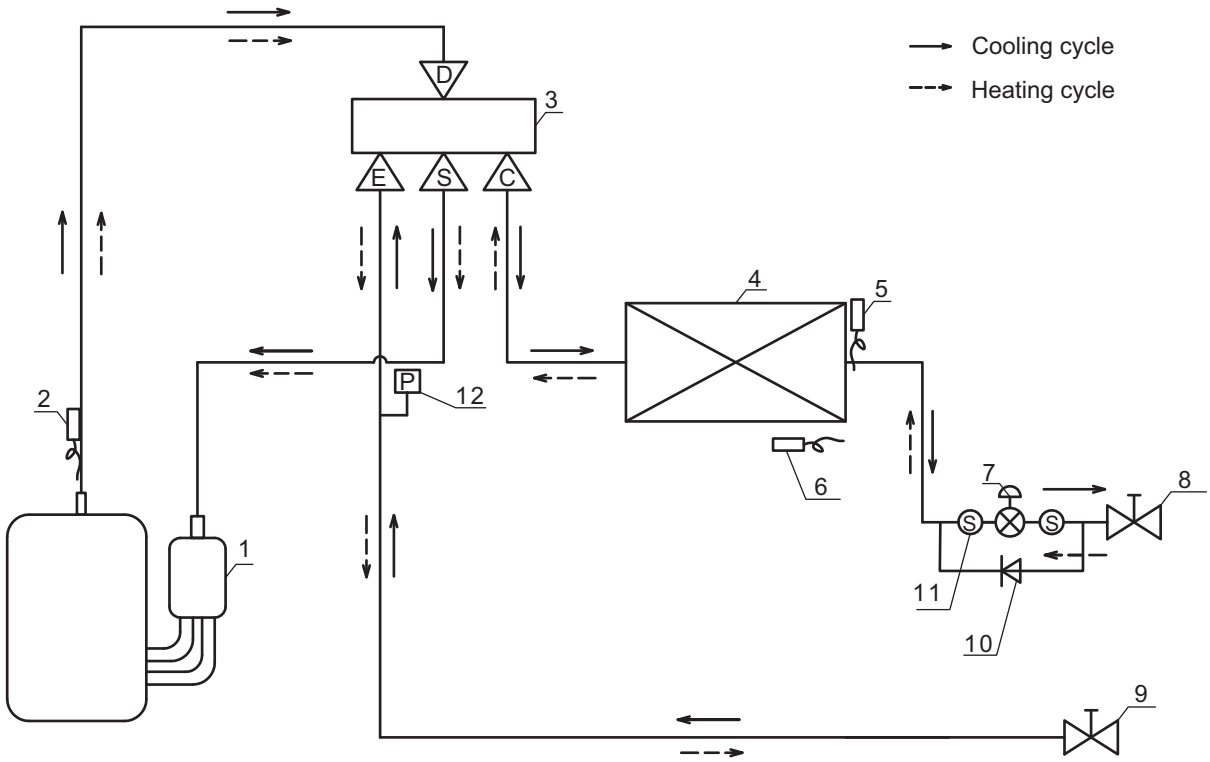
Keep the space shown in the installation examples.

If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.



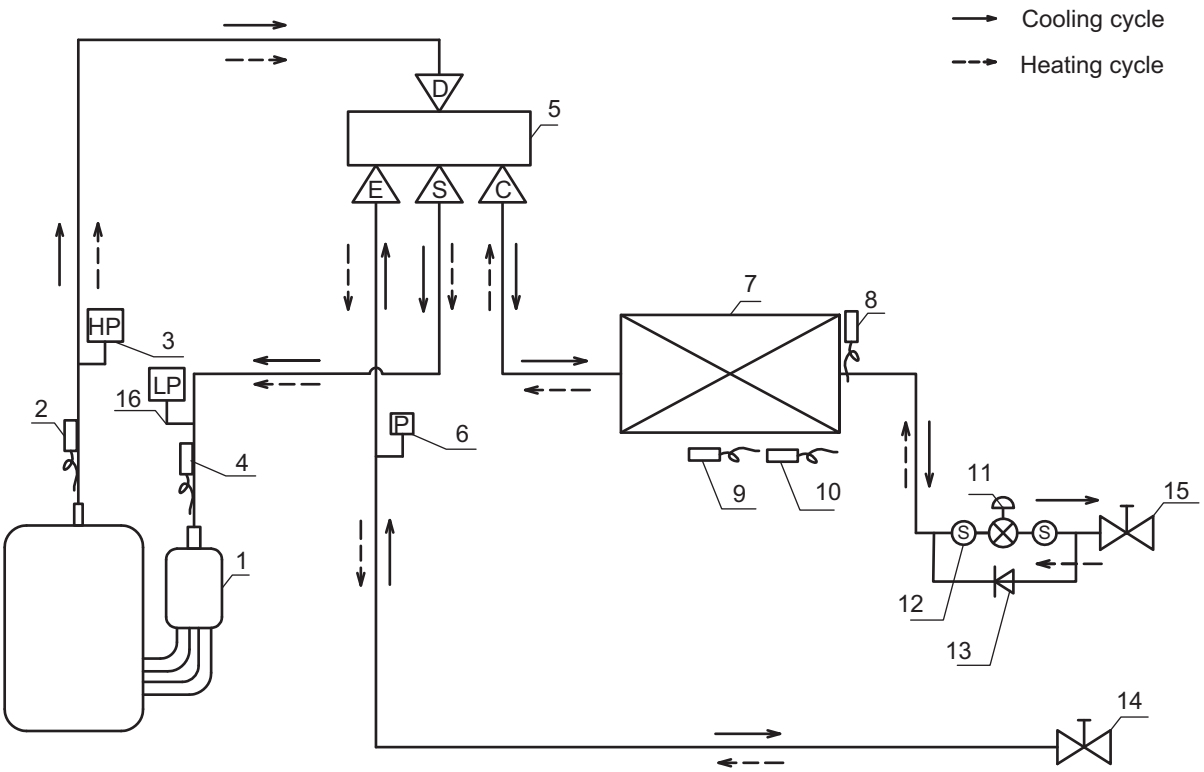
# 4. Refrigerant circuit

## 4-1. Models: WHM24SZA21S and WHM36SZA21S




| List of components | |
|---|---|
| 1 | Compressor |
| 2 | Discharge temperature sensor |
| 3 | 4-way valve |
| 4 | Outdoor heat exchanger |
| 5 | Coil temperature sensor |
| 6 | Ambient temperature sensor |
| 7 | Electronic expansion valve |
| 8 | Stop valve (Liquid) |
| 9 | Stop valve (Gas) |
| 10 | One-way valve |
| 11 | Strainer |
| 12 | Pressure sensor |

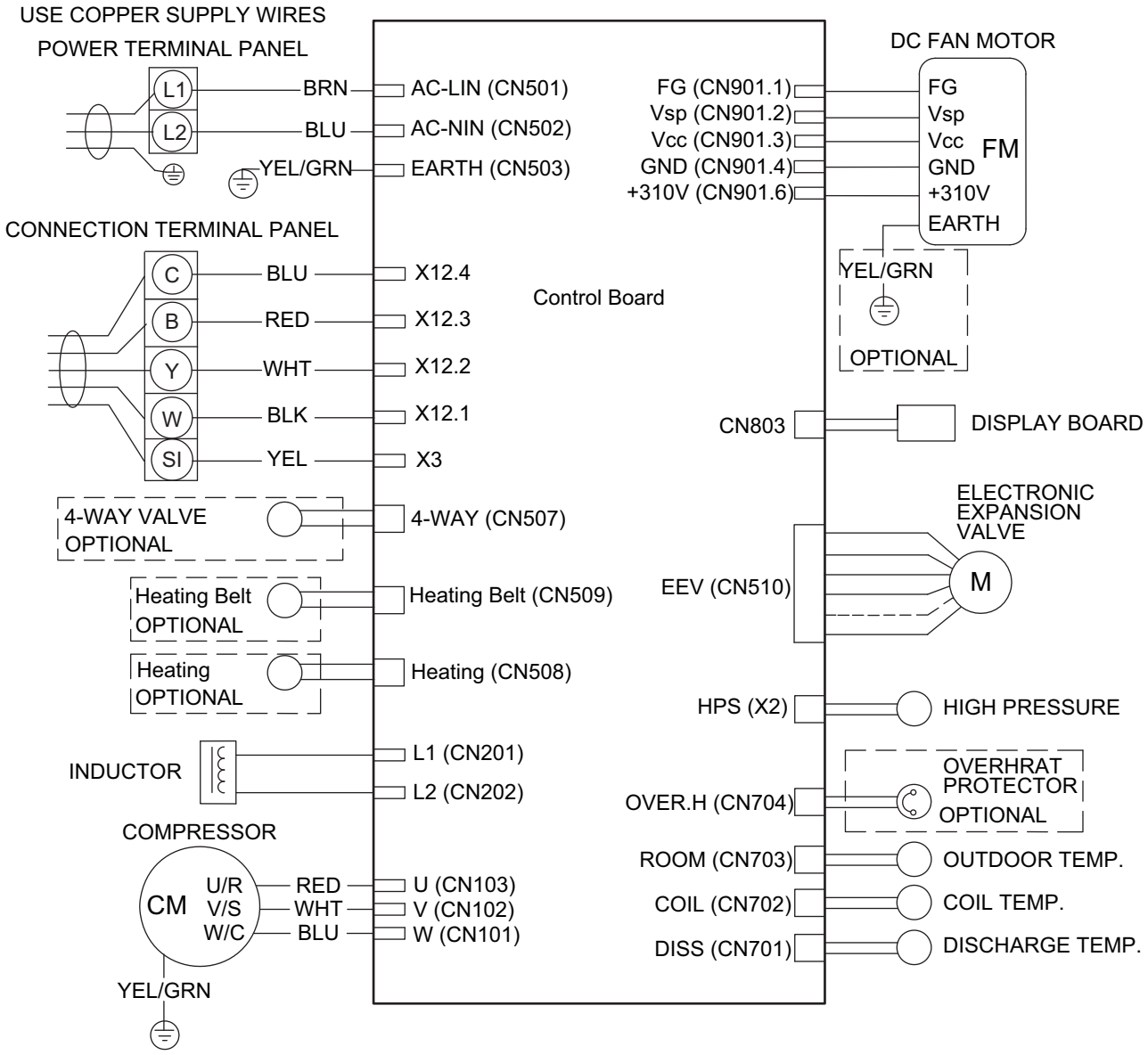
# 4-2. Models: WHM48SZA21S and WHM60SZA21S




| List of components | |
|---|---|
| 1 | Compressor |
| 2 | Discharge temperature sensor |
| 3 | High pressure switch |
| 4 | Suction temperature sensor |
| 5 | 4-Way valve |
| 6 | Pressure sensor |
| 7 | Outdoor heat exchanger |
| 8 | Ambient temperature sensor |
| 9 | Coil temperature sensor |
| 10 | Defrost temperature sensor |
| 11 | Electronic expansion valve |
| 12 | Strainer |
| 13 | One-way valve |
| 14 | Stop valve (Gas) |
| 15 | Stop valve (Liquid) |
| 16 | Low pressure switch |

# 5. Wiring diagrams

## 5-1. Models: WHM24SZA21S and WHM36SZA21S



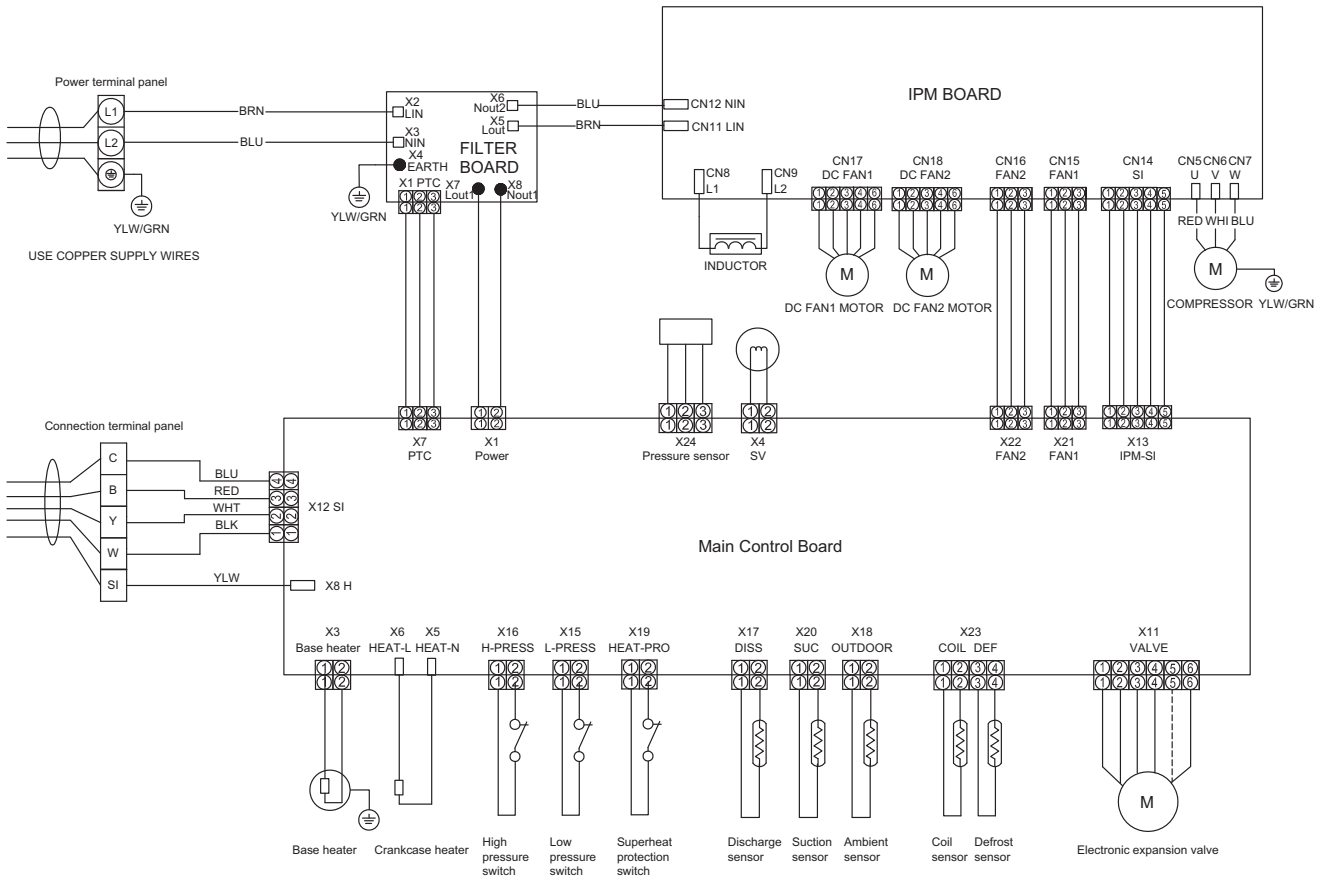

Fan motor

| Pin No. | Terminal code | Function of terminal | Lead wire color |
|---|---|---|---|
| 1 | FG | Revolution pulse output | Blue |
| 2 | Vsp | Speed control voltage input | Yellow |
| 3 | Vcc | Control power voltage input | White |
| 4 | GND | GND | Black |
| 5 | —— | ——— | —— |
| 6 | Vm | Motor power voltage input | Red |

Compressor
24 model: 0.75 Ω
36 model: 0.75 Ω
(20℃ 68°F)

| Temperature | 0℃ 32°F | 20℃ 68°F | 30℃ 86°F |
|---|---|---|---|
| Thermistor (Outdoor temp.) | 15 kΩ<br>1.3 V | 6.5 kΩ<br>2.2 V | 4.5 kΩ<br>2.7 V |
| Thermistor (Coil & Defrost temp.) | 15 kΩ<br>1.3 V | 6.5 kΩ<br>2.2 V | 4.5 kΩ<br>2.7 V |
| Thermistor (Discharge temp.) | 187 kΩ<br>0.18 V | 72.1 kΩ<br>0.43 V | 46.5 kΩ<br>0.64 V |

# 5-2. Models: WHM48SZA21S and WHM60SZA21S




Fan motor

| Pin No. | Terminal code | Function of terminal | Lead wire color |
|---|---|---|---|
| 1 | FG | Revolution pulse output | Blue |
| 2 | Vsp | Speed control voltage input | Yellow |
| 3 | Vcc | Control power voltage input | White |
| 4 | GND | GND | Black |
| 5 | —— | ——— | —— |
| 6 | Vm | Motor power voltage input | Red |

Compressor

48 model: 0.63 Ω
60 model: 0.63 Ω
(20℃ 68°F)

| Temperature | 0℃ 32°F | 20℃ 68°F | 30℃ 86°F |
|---|---|---|---|
| Thermistor (Outdoor temp.) | 15 kΩ<br>1.3 V | 6.5 kΩ<br>2.2 V | 4.5 kΩ<br>2.7 V |
| Thermistor (Coil & Defrost temp.) | 15 kΩ<br>1.3 V | 6.5 kΩ<br>2.2 V | 4.5 kΩ<br>2.7 V |
| Thermistor (Discharge temp.) | 187 kΩ<br>0.18 V | 72.1 kΩ<br>0.43 V | 46.5 kΩ<br>0.64 V |
| Thermistor (Suction temp.) | 15 kΩ<br>1.3 V | 6.5 kΩ<br>2.2 V | 4.5 kΩ<br>2.7 V |

# 6. Electrical characteristics

| Model name | | | | WHM24SZA21S | WHM36SZA21S |
|---|---|---|---|---|---|
| Power supply | Voltage | | V | 208/230 ~ | |
| | Frequency | | Hz | 60 | |
| MCA*1 | | | A | 15 | 23 |
| Wiring spec.*2 | MAX. CKT. BKR*3 | | A | 25 | 35 |
| | Power cable | | AWG | 3 × 12 | 3 × 10 |
| | Connection cable*4 | Size | AWG | 5 × 16 | |
| | | Limited wiring length | ft (m) | 167 (51) | 249 (76) |

| Model name | | | | WHM48SZA21S | WHM60SZA21S |
|---|---|---|---|---|---|
| Power supply | Voltage | | V | 208/230 ~ | |
| | Frequency | | Hz | 60 | |
| MCA*1 | | | A | 35 | |
| Wiring spec.*2 | MAX. CKT. BKR*3 | | A | 50 | |
| | Power cable | | AWG | 3 × 8 | |
| | Connection cable*4 | Size | AWG | 5 × 16 | |
| | | Limited wiring length | ft (m) | 249 (76) | |

*1: Minimum Circuit Ampacity (Calculation based on UL60335-2-40)

*2: Selected sample based on Japan Electrotechnical Standards and Codes Committee E0005. As the regulations of wire size and circuit breaker differ in each country or region, select appropriate devices complied to the regional standard.

*3: Maximum Circuit Breaker

*4: Limit voltage drop to less than 2%. If voltage drop is 2% or more, increase cable conductor size.



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# 7. Accessories

| Part name | Q'ty | Part name | Q'ty |
|---|---|---|---|
| Installation and operation manual | 1 | Drain hose | 1 |
| Rubber cushion | 1 | | |

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